



Montana Department of
ENVIRONMENTAL QUALITY

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June 27, 2012

Jennifer Skare
Treasure State Construction, Inc.
36344 Glover Road
Polson, MT 59860

Dear Ms. Skare:

Montana Air Quality Permit #2893-08 is deemed final as of June 27, 2012, by the Department of Environmental Quality (Department). This permit is for a portable non-metallic mineral processing plant and associated equipment. 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,

Charles Homer
Manager, Air Permitting, Compliance and Registration
Air Resources Management Bureau
(406) 444-5279

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Environmental Science Specialist
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CH:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #2893-08

Treasure State Construction, Inc.
36344 Glover Road
Polson, MT 59860

June 27, 2012



MONTANA AIR QUALITY PERMIT

Issued To: Treasure State Construction, Inc.
36344 Glover Road
Polson, MT 59860

MAQP: #2893-08
Administrative Amendment (AA) Request
Received: 05/23/2012
Department's Decision on AA: 06/11/2012
Permit Final: 06/27/2012
AFS#: 777-2893

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Treasure State Construction, Inc. (Treasure State), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

SECTION I: Permitted Facilities

A. Plant Location

Treasure State owns and operates a portable non-metallic mineral processing plant at various locations throughout Montana. MAQP #2893-08 applies while operating at any location in Montana, except within those areas having a Montana Department of Environmental Quality (Department)-approved permitting program or those areas considered tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum #8 will apply to the Treasure State facility while operating at locations in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of ten microns or less (PM₁₀) nonattainment areas.

B. Current Permit Action

On May 23, 2012, the Department received a request to amend Treasure State's air quality permit to update the rated capacity of the diesel-fired engine which drives the generator set, review the permit to ensure deminimis friendly language was used by the Department, and to incorporate limits which maintain potential emissions below 80 tons per year (tpy). Additionally, this permitting action updates the emissions inventory and rule references and language used by the Department.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity in excess of the following averaged over a consecutive minutes (ARM 17.8.340 and 40 Code of Federal Regulations (CFR) Part 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.

2. All visible emissions from any other NSPS-affected equipment (such as screens and conveyors) shall not exhibit an opacity in excess of the following averaged over six consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO):
 - For equipment that commence construction, modification, or reconstruction on or after April 22, 2008: 7% opacity.
 - For equipment that commence construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008: 10% opacity.
3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
4. Water and water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749 and ARM 17.8.752).
5. Treasure State shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Treasure State shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.308).
7. Treasure State shall not operate more than two (2) crushers at any given time and the total combined maximum rated design capacity of the crushers shall not exceed 820 tons per hour (TPH) (ARM 17.8.749).
8. Treasure State shall not operate more than two (2) screens at any given time and the combined maximum rated design capacity of the screen shall not exceed 640 TPH (ARM 17.8.749).
9. Treasure State shall not operate or have on site more than one (1) diesel-fired generator set at any given time and the maximum rated design capacity of the diesel engine driving the generator shall not exceed 1,446 brake-horsepower (bhp) (ARM 17.8.1204).
10. Operation of the diesel-fired generator set shall not exceed 3,550 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 Treasure State, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons of emissions during any rolling 12-month time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
12. Treasure State shall comply with all applicable standards and limitations, and the 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).

13. Treasure State shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal 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, Subpart ZZZZ).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but no later than 180 days after initial startup, an EPA Method 9 opacity test and/or other methods and procedures, as specified in 40 CFR Part 60.675, must be performed on all NSPS-affected equipment to demonstrate compliance with the emissions limitations contained in Sections II.A.1 and II.A.2 (ARM 17.8.340, 40 CFR Part 60, Subpart A and Subpart OOO). Additional testing may be required by 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Reporting Requirements

1. If this portable crushing/screening plant is moved to another location, an Intent to Transfer Form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer Form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).
2. Treasure State 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 is not limited to, all sources of emissions identified in the most recent emission inventory report and sources identified 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 units as required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Treasure State 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 emission 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 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).

4. Treasure State 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 Treasure State as a permanent business record for at least 5 years following the date of the measurement, must be submitted to the Department upon request, and must be available at the plant site for inspection by the Department (ARM 17.8.749).
5. Treasure State shall document, by month, the total hours of operation of the diesel-fired engine/generator. By the 25th day of each month, Treasure State shall calculate the hours of operation for the diesel-fired engine/generator for the previous 12 months to verify compliance with the 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).
6. Treasure State shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as require 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 (ARM17.8.749 and ARM 17.8.1204).

Section III: General Conditions

- A. Inspection – Treasure State 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 Emission Monitoring Systems (CEMS)/Continuous Emission Rate Monitoring Systems CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Treasure State fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Treasure State of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds 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 Portable Inc. 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. Treasure State shall comply with the conditions contained in this permit while operating at any location in Montana, except within those areas having a Department-approved permitting program or areas considered tribal areas.

Montana Air Quality Permit (MAQP) Analysis
Treasure State Construction, Inc.
MAQP #2893-08

I. Introduction/Process Description

A. Permitted Equipment

Treasure State Construction, Inc. (Treasure State) owns and operates a portable non-metallic mineral processing plant, consisting of up to two crushers and two screens with a combined maximum rated design capacity of 820 tons per hour (TPH) crushing production and 640 TPH screening production. Permitted equipment also includes associated equipment, such as; feeders, conveyors (including integrated equipment conveyors), stackers, and other material handling equipment. The plant is powered by a single generator set with a 1,446 brake-horsepower (bhp) diesel engine.

B. Source Description

Treasure State proposes to use this crushing/screening plant to crush, screen, and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the crushing/screening plant via a hopper and transferred by conveyor to the crushers. From the crusher, materials are sent to the screens, where they are separated and conveyed to stockpiles.

The designated home pit location for this plant is located in Section 26, Township 22 North, Range 20 West in Lake County, Montana, known as the Rehbein site. The Rehbein site is located on the Confederated Salish and Kootenai Tribal areas of the Flathead Reservation.

C. Permit History

On September 9, 1995, **MAQP #2893-00** was issued to Treasure State to operate a portable 1993 EL-Jay cone crusher, a 1974 Cedarapids feeder, two 1990 conveyors (36" x 50'), two screens, and a Caterpillar 3512 Genset generator.

On May 1, 1996, **MAQP #2892-01** was issued to Treasure State to operate a portable 1993 EL-Jay 1313 cone crusher, a 1974 Cedarapids feeder, two 1990 conveyors (36" x 50'), two screens, and a Caterpillar 3512 Genset generator at the North ½ of the Southwest ¼, Section 34, Township 29 North, Range 20 West, in Flathead County, during the summer and winter seasons (January 1 – December 31). Because this location was approximately within 10 kilometer (km) of the Kalispell particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment area, an addendum was necessary for operation. Therefore, **Addendum #1** was established.

On November 9, 1997, **MAQP #2893-02** and **Addendum #2** was issued to Treasure State to operate in or within 10 km of a PM₁₀ nonattainment areas during the summer season (April 1 – September 30) and in the Southeast ¼ of the Northeast ¼ of Section 2, Township 29 North, Range 21 West, in Lincoln County, Montana during the winter season (October 1 – March 31). An hourly operational limit was added to the permit to allow the facility to stay below the Prevention of Significant Deterioration (PSD) threshold levels. A review was conducted during the original permit issuance, but the emission factors changed after the original permit issuance. These rule references were also updated.

On February 20, 1999, Treasure State was issued a modification to MAQP #2893-02 to allow operation at a location that is within 10 km of the Libby PM₁₀ nonattainment area during the winter and summer seasons and any other location that is in or within 10 km of certain PM₁₀

nonattainment areas during the summer season. In addition, the rule references and emission factors were updated and the permitting language was changed to reflect the current format used for writing permits. Finally, Treasure State accepted an hourly operational limit for the generator to allow the facility to stay below the Title V operating permit threshold. Therefore, a Title V operating permit is not required. **MAQP #2893-03** replaced MAQP #2893-02 and **Addendum #3** replaced Addendum #2.

On December 30, 1999, Treasure State was issued a modification to MAQP #2893-03 and Addendum #3 to allow for winter season operations (October 1, 1999 – March 31, 2000) at the following locations; the Creston Gravel Pit located within the Northeast ¼ of the Southwest ¼ and the Northwest ¼ of the Southeast ¼ of Section 34 Township 29 North, Range 20 West, in Flathead County and the Highway Maintenance Yard Gravel Pit located within the Northeast ¼ of the Northwest ¼ of Section 14 Township 21 North, Range 29 West, in Sanders County. According to Department of Environmental Quality (Department) guidance, because the selected operating sites are within 10 km of the Kalispell PM₁₀ nonattainment area and the Thompson Falls PM₁₀ nonattainment area, respectively, the Department has conducted SCREEN3 VIEW modeling to establish allowable production limits in order to ensure compliance with National Ambient Air Quality Standards (NAAQS). **MAQP #2892-04** replaces MAQP #2892-03 and **Addendum #4** replaces Addendum #3.

On February 7, 2000, Treasure State requested a permit modification to include the 1999 Barmac Impactor (maximum capacity 500 TPH) into the equipment previously covered under MAQP #2893-04. The Barmac Impactor was inadvertently omitted from MAQP #2893-03 and MAQP #2893-04, though the equipment addition was initially requested January 7, 1999. During this permitting action, the Department updated the emissions inventory with the new emission factors. As a result of this action, the addition of the equipment was accomplished under the de minimis rule and the production limitation of MAQP #2893-04 was removed. **MAQP #2893-05** replaced MAQP #2893-04 and **Addendum #5** replaced Addendum #4.

This permit action was in response to a request for an administrative amendment of MAQP #2893-05 and Addendum #5. The permit action generalized the permit and renewed the expired addendum. Further, the production limit that was removed in MAQP #2893-04 was again established, using new emissions factors to generalize the permit and keep Treasure State from exceeding any ambient air quality thresholds. **MAQP #2893-06** replaced MAQP #2893-05 and **Addendum #6** replaced Addendum #5.

This permit action was in response to a request to allow for the operation of a larger diesel generator (1135 kilowatt (kW)) and to make the permit more de minimis friendly. In addition, the permit action referenced a new regulation impacting diesel generators and updated emission factors to reflect current factors used by the Department. **MAQP #2893-07** replaced MAQP #2893-06 and **Addendum #7** replaced Addendum #6.

D. Current Permit Action

On May 23, 2012, the Department received a request to amend Treasure State's air quality permit to update the rated capacity of the diesel-fired engine which drives the generator set, review the permit to ensure de minimis friendly language was used by the Department, and to incorporate limits on the operation of the diesel-fired generator set in order maintain potential emissions below 80 tons per year (tpy). At the Departments request, Treasure State agreed to accept federally enforceable conditions to further reduce emissions, beyond the Title V Major Source threshold, in order to avoid the additional monitoring and increased inspections associated with the Compliance Monitoring Strategy (CMS) maintained in connection with the U.S. Environmental Protection Agency (EPA). In addition, the current permit action updates the emission inventory and rule references used by the Department. **MAQP #2893-08** replaces MAQP #2893-07 and **Addendum #8** replaces Addendum #7.

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 quotations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department. 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).

Treasure State shall comply with all requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant 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 (SO₂)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)

4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standards for Ozone (O₃)
6. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
7. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Treasure State must comply with the applicable ambient air quality standards.

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged to an outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions are taken to control emissions of airborne particulate matter. (2) Under this rule, Treasure State 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 PM 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 rule.
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 truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standards 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). Based on the information submitted by Treasure State the portable crushing/screening operation and associated equipment are applicable to NSPS (40 CFR 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 OOO – Standards of Performance for Nonmetallic Mineral Processing Plants. In order for a crushing plant to be subject to this subpart, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Based on the information submitted by Treasure State, the portable crushing equipment to be used under MAQP #2893-08 is subject to this subpart as it meets the definition of an affected facility constructed after August 31, 1983.

- 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. As the permit is written de minimis friendly, Treasure State may substitute compression ignition internal combustion engine(s), therefore applicability to this subpart shall be dependent upon the date of construction and/or manufacture of the diesel 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. Based on the information submitted by Treasure State the associated diesel engines are applicable to NESHAP (40 CFR 63), as follows:
 - 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. As Treasure State is considered an area source of HAP emissions and operates RICE equipment the engine(s) are potentially subject to this subpart.
- D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:
- 1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A fee is not required for the current permit action because the permit action is considered an administrative permit change.
 - 2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. This operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.
- An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions which pro-rate the required fee amount.
- E. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tpy of any pollutant. Treasure State has a PTE greater than 15 tpy of PM, PM₁₀, oxides of nitrogen (NO_x), and CO; 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 the installation, modification, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative 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. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative action.
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 Best Available Control Technology (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 Treasure State of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of Treasure State, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major 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 sub-chapter would otherwise allow.

This facility is not a major stationary source because it is not listed and the facility's PTE is less than 250 tpy (excluding fugitive emissions) of any air pollutant.

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 tpy of any pollutant.
 - b. PTE > 10 tpy of any single Hazardous Air Pollutant (HAP), PTE > 25 tpy of combined HAPs, or a lesser quantity as the Department may establish by rule.
 - c. Sources with the PTE > 70 tpy of PM₁₀ in a serious PM₁₀ 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 MAQP #2893-08 for Treasure State, the following conclusions were made:
 - a. Treasure State has requested federally-enforceable permit operating limits be established to maintain the facility's PTE below 100 tpy and 80 tpy.
 - b. The facility's PTE is less than 10 tpy of any single HAP and less than 25 tpy of combined HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to a current NSPS (40 CFR 60, Subpart OOO and potentially Subpart IIII).
 - e. This facility is potentially subject to a current NESHAP standard (40 CFR 63, Subpart ZZZZ).
 - 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.

Treasure State has 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.

- 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 required by ARM 17.8.1204(3) shall contain a certification of truth, accuracy, and completeness by a responsible official. 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 any new or modified source. Treasure State shall install on the new or modified source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be used.

Calculations $(0.00054 \text{ lbs/ton}) * (820 \text{ tons/hr}) = 0.44 \text{ lbs/hr}$
 $(0.4428 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 1.94 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 0.0001 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
 Calculations $(0.0001 \text{ lbs/ton}) * (820 \text{ tons/hr}) = 0.08 \text{ lbs/hr}$
 $(0.082 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.36 \text{ TPY}$

Aggregate Cold Deck Screens [SCC 3-05-020-02]

Process Rate: 640 tons/hour
 Operating Hours: 8760 hours/year

Particulate Emissions (controlled):

PM Emissions:

Emission Factor 0.0022 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
 Calculations $(0.0022 \text{ lbs/ton}) * (640 \text{ tons/hr}) = 1.41 \text{ lbs/hr}$
 $(1.408 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 6.17 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 0.00074 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
 Calculations $(0.00074 \text{ lbs/ton}) * (640 \text{ tons/hr}) = 0.47 \text{ lbs/hr}$
 $(0.4736 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 2.07 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 0.00005 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
 Calculations $(0.00005 \text{ lbs/ton}) * (640 \text{ tons/hr}) = 0.03 \text{ lbs/hr}$
 $(0.032 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.14 \text{ TPY}$

Material Handling:

Fragmented Stone Load-In ► Ground Storage [SCC 3-05-020-31]

Process Rate: 820 tons/hour [Crusher Capacity]
 Operating Hours: 8760 hours/year

Particulate Emissions (uncontrolled):

PM Emissions:

Emission Factor 0.000031 lbs/ton [PM = PM₁₀/0.51 ► AP-42 Appendix B.2 - Table B.2.2, Category 3, 1/95]
 Calculations $(0.000031 \text{ lbs/ton}) * (820 \text{ tons/hr}) = 0.03 \text{ lbs/hr}$
 $(0.02542 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.11 \text{ TPY}$

PM₁₀ Emissions:

Emission Factor 0.000016 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
 Calculations $(0.000016 \text{ lbs/ton}) * (820 \text{ tons/hr}) = 0.01 \text{ lbs/hr}$
 $(0.01312 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.06 \text{ TPY}$

PM_{2.5} Emissions:

Emission Factor 0.000005 lbs/ton [PM = PM₁₀*0.15 ► AP-42 Appendix B.2 - Table B.2.2, Category 3, 1/95]
 Calculations $(0.000005 \text{ lbs/ton}) * (820 \text{ tons/hr}) = 0.00 \text{ lbs/hr}$
 $(0.003813 \text{ lbs/hr}) * (8760 \text{ hrs/yr}) * (0.0005 \text{ tons/lb}) = 0.02 \text{ TPY}$

Conveyor Transfer Points [SCC 3-05-020-06]

Process Rate: 820 tons/hour [Maximum Facility Capacity]
Operating Hours: 8760 hours/year
Total Transfers: 12 Transfers [Based on Process Flow Diagram]

Particulate Emissions (controlled):

PM Emissions:

Emission Factor 0.00014 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
Calculations (0.00014 lbs/ton) * (820 tons/hr) * (12 Transfers) = 1.38 lbs/hr
(1.3776 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 6.03 TPY

PM₁₀ Emissions:

Emission Factor 0.000046 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
Calculations (0.000046 lbs/ton) * (820 tons/hr) * (12 Transfers) = 0.45 lbs/hr
(0.453 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 1.98 TPY

PM_{2.5} Emissions:

Emission Factor 0.000013 lbs/ton processed [AP-42 Table 11.19.2-2, 8/04]
Calculations (0.000013 lbs/ton) * (820 tons/hr) * (12 Transfers) = 0.13 lbs/hr
(0.128 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) = 0.56 TPY

Storage Pile Load-In & Load-Out [SCC 30502505 / 30502502]

Process Rate: 820 tons/hour [Maximum Facility Capacity]
Operating Hours: 8760 hours/year
Pile Transfers: 2 [Plant Load-in → Initial Pile Formation]

Particulate Emissions (uncontrolled):

Emission Factor $EF = k (0.0032) * [(U/5)^{1.3} / (M / 2)^{1.4}]$ [AP-42 13.2.4, 11/06]

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 PM₁₀ = 0.35 [AP-42 13.2.4, 11/06]

k, Dimensionless Particle Size Multiplier PM_{2.5} = 0.053 [AP-42 13.2.4, 11/06]

U, Mean Wind Speed (mph) = 9.3 [ASOS/AWOS AVE-MT 10 yr Ave.]

M, Material Moisture Content (%) = 2.53 [AP-42 13.2.4.3, 11/06]

PM Emissions:

Emission Factor $EF = 0.74 * (0.0032) * [(9.33/5)^{1.3} / (2.525/ 2)^{1.4}] =$ 0.0038 lbs/ton
Calculations (0.0038 lbs/ton) * (820 tons/hr) * (2 pile transfers) = 6.31 lbs/hr
(6.31 lbs/hr) * (8760 hours/yr) * (0.0005 tons/lb) = 27.62 TPY

PM₁₀ Emissions:

Emission Factor $EF = 0.35 * (0.0032) * [(9.33/5)^{1.3} / (2.525/ 2)^{1.4}] =$ 0.0018 lbs/ton
Calculations (0.0018 lbs/ton) * (820 tons/hr) * (2 piles) = 2.98 lbs/hr
(2.98 lbs/hr) * (8760 hours/yr) * (0.0005 tons/lb) = 13.06 TPY

PM_{2.5} Emissions:

Emission Factor $EF = 0.053 * (0.0032) * [(9.33/5)^{1.3} / (2.525/ 2)^{1.4}] =$ 0.00028 lbs/ton
Calculations (0.0003 lbs/ton) * (820 tons/hr) * (2 piles) = 0.45 lbs/hr

$$(0.45 \text{ lbs/hr}) * (8760 \text{ hours/yr}) * (0.0005 \text{ tons/lb}) = 1.98 \text{ TPY}$$

Diesel Generator Engine [SCC 2-02-001-02]

Engine Rating: 1446 bhp [Design Maximum Output]
 Fuel Input: 10.12 MMBtu/hr [BSFC →7,000 Btu/hp-hr]
 73.9 gallons/hour [Estimated →19,300 Btu/lb]
 Operating Hours: 3550 hours/year

Particulate Emissions (uncontrolled):

PM Emissions:

Emission Factor 0.0022 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.0022 lb/hp-hr) * (1446 bhp) = 3.18 lbs/hr
 (3.18 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 5.65 TPY

PM₁₀ Emissions:

Emission Factor 0.0022 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.0022 lb/hp-hr) * (1446 bhp) = 3.18 lbs/hr
 (3.18 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 5.65 TPY

PM_{2.5} Emissions (filterable):

Emission Factor 0.0479 lb/MMBtu [AP-42 Table 3.4-2, 10/96]
 Calculations (0.0479 lb/MMBtu) * (10.12 MMBtu/hr) = 0.48 lbs/hr
 (0.48 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 0.86 TPY

PM_{2.5} Emissions (condensable):

Emission Factor 0.0077 lb/MMBtu [AP-42 Table 3.4-2, 10/96]
 Calculations (0.0077 lb/MMBtu) * (10.12 MMBtu/hr) = 0.08 lbs/hr
 (0.08 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 0.14 TPY

CO Emissions (uncontrolled):

Emission Factor 0.00668 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.00668 lb/hp-hr) * (1446 bhp) = 9.66 lbs/hr
 (9.66 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 17.15 TPY

NOx Emissions (uncontrolled):

Emission Factor 0.031 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.031 lb/hp-hr) * (1446 bhp) = 44.83 lbs/hr
 (44.83 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 79.57 TPY

SO₂ Emissions (uncontrolled):

Emission Factor 0.00205 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.00205 lb/hp-hr) * (1446 bhp) = 2.96 lbs/hr
 (2.96 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 5.26 TPY

VOC Emissions (uncontrolled):

Emission Factor 0.002514 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations (0.002514 lb/hp-hr) * (1446 bhp) = 3.64 lbs/hr
 (3.64 lbs/hr) * (3550 hrs/yr) * (0.0005 tons/lb) = 6.45 TPY

Unpaved Roadways (Haul Roads) - Secondary Emissions

Miles Travelled: 5 Miles/Day [Estimate]
 Vehicle Weight: 50 Tons [Mean Vehicle Weight Empty/Full]
 Control Method: Water Application
 Control Efficiency (C_e): 50%

Particulate Emissions (controlled):

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 PM₁₀ = 1.5 [AP-42 Table 13.2.2-2, 11/06]
 k, Empirical Constant PM_{2.5} = 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 [Applicant Provided Data]
 a, Empirical Constant PM = 0.7 [AP-42 Table 13.2.2-2, 11/06]
 a, Empirical Constant PM₁₀/PM_{2.5} = 0.9 [AP-42 Table 13.2.2-2, 11/06]
 b, Empirical Constant PM - PM_{2.5} = 0.45 [AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor $EF = 4.9 * (7.1/12)^{0.7} * (50/3)^{0.45} = 12.04$ lbs/VMT
 Calculations $(12.04 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 C_e) = 30.09$ lbs/day
 $(30.09 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 5.49$ TPY

PM₁₀ Emissions:

Emission Factor $EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45} = 3.32$ lbs/VMT
 Calculations $(3.32 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 C_e) = 8.29$ lbs/day
 $(8.29 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 1.51$ TPY

PM_{2.5} Emissions:

Emission Factor $EF = 0.15 * (7.1/12)^{0.9} * (50/3)^{0.45} = 0.33$ lbs/VMT
 Calculations $(0.33 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 C_e) = 0.83$ lbs/day
 $(0.83 \text{ lbs/day}) * (365 \text{ days/yr}) * (0.0005 \text{ tons/lb}) = 0.15$ TPY

V. Existing Air Quality

The areas for which this facility is permitted to operate under MAQP #2893-08 has been designated unclassified/attainment with all ambient air quality standards and there are no major air pollution sources in the surrounding area.

Addendum #8 to this permit will apply to the source while operating in or within 10 km of any nonattainment area during the summer season (April 1 – September 30) and two specified sites within the Thompson Falls and Kalispell PM₁₀ nonattainment areas during the winter season (October 1 – March 31).

VI. Air Quality Impacts

MAQP #2893-08 covers operation of the crushing and screen plant while operating in areas within Montana that are classified as attainment or unclassifiable with federal ambient air quality standards, 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,

and would limit the facility's emissions below the major source threshold. 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.

If the source locates and operates in or within 10 km of any PM₁₀ nonattainment area, Treasure State will be required to operate in accordance with MAQP #2893-08 and Addendum #8, which includes more stringent limits and conditions to ensure that the proposed operation does not result in additional degradation of air quality in the affected nonattainment area. A more detailed discussion and analysis of ambient impacts from operations locating in or within 10 km of certain PM₁₀ nonattainment areas is contained in the Addendum Analysis.

VII. Ambient Air Impact Analysis

The Department determined that there will be no significant impact from this permit action because this permitting action is considered an administrative action. Furthermore, the Department believes that the amount of emissions generated by this project will not exceed any set ambient 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)

IX. Environmental Assessment

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

Analysis Prepared by: D. Kuenzli
Date: May 30, 2012

Addendum #8
Treasure State Construction, Inc.
Montana Air Quality Permit (MAQP) #2893-08

An addendum to MAQP #2893-08 is issued to Treasure State Construction, Inc. (Treasure State), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

I. Permitted Equipment

Treasure State Construction, Inc. (Treasure State) owns and operates a portable non-metallic mineral processing plant, consisting of up to two crushers and two screens with a combined maximum rated design capacity of 820 tons per hour (TPH) crushing production and 640 TPH screening production. Permitted equipment also includes associated equipment, such as: feeders, conveyors (including integrated equipment conveyors), stackers, and other material handling equipment. The plant is powered by a single 1,446 brake-horsepower (bhp) diesel engine generator set.

II. Seasonal and Site Restrictions

Addendum #8 applies to the Treasure State facility while operating at any location in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of ten microns or less (PM₁₀) nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

- A. During the winter season (October 1 – March 31) – The only locations in or within 10 km of a PM₁₀ nonattainment area where Treasure State may operate is:
1. The Creston Gravel Pit located within the Northwest ¼ of the Southwest ¼ and Northwest ¼ of the Southeast ¼ of Section 34 Township 29 North, Range 20 West, in Flathead County.
 2. The Highway Maintenance Yard Gravel Pit located within the Northeast ¼ of the Northwest ¼, Section 14 Township 21 North, Range 29 West, in Sanders County.
 3. Any other site that may be approved, in writing, by the Department of Environmental Quality (Department).
- B. During the summer season (April 1 – September 30) – Treasure State may operate at any locations in or within 10 km of the Butte, Columbia Falls, Kalispell, Libby, Thompson Falls, and Whitefish PM₁₀ nonattainment areas.
- C. Treasure State shall comply with the limitations and conditions contained in Addendum #8 to MAQP #2893-08 while operating in or within 10 km of any of the identified PM₁₀ nonattainment areas. Addendum #8 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #8 at any time based on local conditions of any future site. These conditions may include, but are not limited to, local terrain, meteorological conditions, proximity to residences or other businesses, etc.

III. Limitations and Conditions

- A. Operational Limitations and Conditions – **Winter Season (October 1 – March 31)**
1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is operating (ARM 17.8.749).

2. Treasure State shall not cause or authorize to be discharged into the atmosphere from any equipment, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749). For Standards of Performance for New Stationary Source (NSPS)-affected equipment constructed after April 22, 2008, for which an opacity limitation of 7% applies (such as screens and conveyors), that 7% limit shall apply to the affected equipment (ARM 17.8.340 and 40 Code of Federal Regulation (CFR) 60, Subpart OOO).
3. Treasure State shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).
4. Treasure State shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).
5. Treasure State shall not operate, or have on-site, more than two (2) crushers at any one time. Total crusher production shall not exceed 8,200 tons per day (ARM 17.8.749).
6. Treasure State shall not operate, or have on-site, more than two (2) screens at any one time. Total screen production shall not exceed 6,400 tons per day (ARM 17.8.749).
7. Treasure State shall not operate or have on-site more than one (1) diesel-fired generator set. The maximum capacity of the diesel fired-engine that drives the generator shall not exceed 1,446 brake-horsepower (bhp) (ARM 17.8.749).
8. Operation of the crushing and screening plant, including the diesel-fired generator set, shall not exceed ten (10) hours per day (ARM 17.8.749).

B. Operational Limitations and Conditions – Summer Season (April 1 – September 30)

1. Water spray bars must be available and operated, as necessary, on the crushers, screens, and all transfer points whenever the crushing/screening plant is in operation (ARM 17.8.749).
2. Treasure State shall not cause or authorize to be discharged into the atmosphere from any equipment, any visible emissions that exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749). For NSPS-affected equipment constructed after April 22, 2008 for which an opacity limitation of 7% applies (such as screens and conveyors), that 7% limit shall apply to the affected equipment (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
3. Treasure State shall not cause or authorize to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property any visible fugitive emissions that exhibit an opacity of 10% or greater (ARM 17.8.749).
4. Treasure State shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation (ARM 17.8.749).
5. Treasure State shall not operate or have on site more than two (2) crushers at any given time and the total combined maximum rated design capacity of the crushers shall not exceed 820 tons per hour (TPH) (ARM 17.8.749).

6. Treasure State shall not operate or have on site more than two (2) screens at any given time and the combined maximum rated design capacity of the screen shall not exceed 640 TPH (ARM 17.8.749).
7. Treasure State shall not operate or have on-site more than one (1) diesel-fired generator set. The maximum capacity of the diesel fired-engine that drives the generator shall not exceed 1,446 brake-horsepower (bhp) (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this 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. Production information for the sites covered by this addendum must be maintained for five years and submitted to the Department upon request. The information must include (ARM 17.8.749):
 - a. Daily tons of material crushed by each crusher at each site (including amount of recirculated/rerun material). Treasure State shall document, by day, the total crushing production. Treasure State shall sum the total crushing production for the previous day to demonstrate compliance with the limitations in Sections III.A.5.
 - b. Daily tons of material screened by each screen at each site (including amount of recirculated/rerun material). Treasure State shall document, by day, the total screening production. Treasure State shall sum the total screening production for the previous day to demonstrate compliance with the limitations in Section III.A.6.
 - c. Daily hours of operation of the crushing/screening plant and the diesel-fired generator set at each site. Treasure State shall document, by day, the hours operated. Treasure State shall sum the total operating hours for the previous day to demonstrate compliance with the limitations in Section III.A.8.
 - d. Daily bhp rating for the diesel-fired generator engine at each site to demonstrate compliance with the limitations in Sections III.A.7 and III.B.7.
 - e. Daily tons of bulk material loaded at each site (production).
 - f. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum #8 Analysis
Treasure State Construction, Inc.
Montana Air Quality Permit (MAQP) #2893-08

I. Permitted Equipment

Treasure State Construction, Inc. (Treasure State) owns and operates a portable non-metallic mineral processing plant, consisting of up to two crushers and two screens with a combined maximum rated design capacity of 820 tons per hour (TPH) crushing production and 640 TPH screening production. Permitted equipment also includes associated equipment, such as: feeders, conveyors (including integrate equipment conveyors), stackers, and other material handling equipment. The plant is powered by a single 1,446 brake-horsepower (bhp) diesel engine generator set.

II. Source Description

Treasure State proposes to use this crushing/screening plant to crush, screen, and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the crushing/screening plant via a hopper and transferred by conveyor to the crushers. From the crusher, materials are sent to the screens, where they are separated and conveyed to stockpiles.

III. Applicable Rules and Regulations

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

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

- A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
- B. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.
- C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:
 - 1. Written notice of Intent to Transfer location and proof of public notice are sent to the Department;
 - 2. The source will operate in the new location for a period of less than 1 year; and

3. The source will not have any significant impact on any particulate matter within an aerodynamic diameter of ten microns or less (PM₁₀) nonattainment area or any Class I area.

IV. Emission Inventory

Daily Emission PM ₁₀				
Emission Source	Summer Season ^(a) [April 1 – September 30]		Winter Season ^(b) [October 1 – March 31]	
	(lbs/hr)	(lbs/day)	(lbs/hr)	(lbs/day)
Aggregate Crushers	0.44	10.63	0.44	4.43
Aggregate Deck Screen	0.47	11.37	0.47	4.74
Material Handling	3.45	82.75	3.45	34.48
Diesel-Fired Generator Set [\leq 1,446 bhp]	3.18	76.35	3.18	31.81
Unpaved Roadways (Haul Roads)	--	8.29	--	8.29
TOTAL EMISSIONS ►		189.38		83.75

^(a) Emission Inventory reflects operation of the mineral processing equipment and diesel generator set on a 24 hour schedule to demonstrate that potential PM₁₀ emissions are below the 547 pounds per day "Summer Season" threshold.

^(b) Emission inventory reflects enforceable limits on hours of operation of the mineral processing plant and diesel generator set to maintain allowable PM₁₀ emissions below the 82 pounds per day "Winter Season" threshold.

ASOS, Automated Surface Observing System
 AWOS, Automated Weather Observing System
 bhp, brake-horsepower
 BSFC, brake-specific fuel consumption
 Btu, British Thermal Units
 EF, emission factor
 hr, hour
 lbs, pounds
 MM, million
 mph, miles per hour

PM₁₀, particulate matter with an aerodynamic diameter of ten microns or less
 SCC, Source Classification Code
 SO₂, sulfur dioxide
 TPH, tons per hour
 TPY, tons per year
 VMT, vehicle miles travelled
 VOC, volatile organic compounds

Portable Crushing and Screening Plant

Production Rate:	Summer Season	Winter Season
Crushers (2) 820 tons/hour (Maximum)	19,680 tons/day (Maximum)	8,200 tons/day (Maximum)
Deck Screen (2) 640 tons/hour (Maximum)	15,360 tons/day (Maximum)	6,400 tons/day (Maximum)

Allowable Hours of Operation [Material Processing Plant] and Generator Set

Summer	24 hours/day
Winter Season:	10 hours/day

Power Source: 1,446 bhp Diesel-Fired Generator Set

Material Processing:

Aggregate Crushers [SCC 3-05-020-01]

Process Rate: 820 tons/hour
 Operating Hours: 24 hours/day (Summer Season)
 10 hours/day (Winter Season)

PM₁₀ Emissions (controlled):

Emission Factor	0.00054 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.00054 lbs/ton) * (820 tons/hr) =	0.44 lbs/hr
	(0.4428 lbs/hr) * (24 hrs/day) =	10.63 lbs/day (Summer Season)
	(0.4428 lbs/hr) * (10 hrs/day) =	4.43 lbs/day (Winter Season)

Aggregate Cold Deck Screens [SCC 3-05-020-02]

Process Rate: 640 tons/hour
Operating Hours: 24 hours/day (Summer Season)
10 hours/day (Winter Season)

PM₁₀ Emissions (controlled):

Emission Factor	0.00074 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.00074 lbs/ton) * (640 tons/hr) =	0.47 lbs/hr
	(0.4736 lbs/hr) * (24 hrs/day) =	11.37 lbs/day (Summer Season)
	(0.4736 lbs/hr) * (10 hrs/day) =	4.74 lbs/day (Winter Season)

Material Handling:

Fragmented Stone Load-In ► Ground Storage [SCC 3-05-020-31]

Process Rate: 820 tons/hour [Crusher Capacity]
Operating Hours: 24 hours/day (Summer Season)
10 hours/day (Winter Season)

PM₁₀ Emissions (uncontrolled):

Emission Factor	0.000016 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.000016 lbs/ton) * (820 tons/hr) =	0.01 lbs/hr
	(0.01312 lbs/hr) * (24 hrs/day) =	0.31 lbs/day (Summer Season)
	(0.01312 lbs/hr) * (10 hrs/day) =	0.13 lbs/day (Winter Season)

Conveyor Transfer Points [SCC 3-05-020-06]

Process Rate: 820 tons/hour [Maximum Facility Capacity]
Operating Hours: 24 hours/day (Summer Season)
10 hours/day (Winter Season)
Total Transfers: 12 Transfers [Based on Process Flow Diagram]

PM₁₀ Emissions (controlled):

Emission Factor	0.000046 lbs/ton processed	[AP-42 Table 11.19.2-2, 8/04]
Calculations	(0.000046 lbs/ton) * (820 tons/hr) * (12 Transfers) =	0.45 lbs/hr
	(0.45264 lbs/hr) * (24 hrs/day) =	10.86 lbs/day (Summer Season)
	(0.45264 lbs/hr) * (10 hrs/day) =	4.53 lbs/day (Winter Season)

Storage Pile Load-In & Load-Out [SCC 30502505 / 30502502]

Process Rate: 820 tons/hour [Maximum Facility Capacity]
Operating Hours: 24 hours/day (Summer Season)
10 hours/day (Winter Season)
Pile Transfers: 2 [Plant Load-in → Initial Pile Formation]

PM₁₀ Emissions (uncontrolled):

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 PM₁₀ = 0.35 [AP-42 13.2.4, 11/06]

k, Dimensionless Particle Size Multiplier PM_{2.5} = 0.053 [AP-42 13.2.4, 11/06]

U, Mean Wind Speed (mph) = 9.3 [ASOS/AWOS AVE-MT 10 yr Ave.]

M, Material Moisture Content (%) = 2.53 [AP-42 13.2.4.3, 11/06]

Emission Factor $EF = 0.35 * (0.0032) * [(9.33/5)^{1.3} / (2.525/2)^{1.4}] = 0.0018 \text{ lbs/ton}$
 Calculations $(0.0018 \text{ lbs/ton}) * (820 \text{ tons/hr}) * (2 \text{ piles}) = 2.98 \text{ lbs/hr}$
 $(2.982 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 71.57 \text{ lbs/day (Summer Season)}$
 $(2.982 \text{ lbs/hr}) * (10 \text{ hrs/day}) = 29.82 \text{ lbs/day (Winter Season)}$

Diesel Generator Engine [SCC 2-02-001-02]

Engine Rating: 1446 bhp [Design Maximum Output]
 Fuel Input: 10.12 MMBtu/hr [BSFC →7,000 Btu/hp-hr]
 73.9 gallons/hour [Estimated →19,300 Btu/lb]
 Operating Hours: 24 hours/day (Summer Season)
 10 hours/day (Winter Season)

PM₁₀ Emissions (uncontrolled):

Emission Factor 0.0022 lb/hp-hr [AP-42 Table 3.3-1, 10/96]
 Calculations $(0.0022 \text{ lb/hp-hr}) * (1446 \text{ bhp}) = 3.18 \text{ lbs/hr}$
 $(3.1812 \text{ lbs/hr}) * (24 \text{ hrs/day}) = 76.35 \text{ lbs/day (Summer Season)}$
 $(3.1812 \text{ lbs/hr}) * (10 \text{ hrs/day}) = 31.81 \text{ lbs/day (Winter Season)}$

Unpaved Roadways (Haul Roads) - Secondary Emissions

Miles Travelled: 5 Miles/Day [Estimate]
 Vehicle Weight: 50 Tons [Mean Vehicle Weight Empty/Full]
 Control Method: Water Application
 Control Efficiency (C_e): 50%

PM₁₀ Emissions:

Emission Factor $EF = k(s/12)^a *$ [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 PM₁₀ = 1.5 [AP-42 Table 13.2.2-2, 11/06]
 k, Empirical Constant PM_{2.5} = 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 [Applicant Provided Data]
 a, Empirical Constant PM = 0.7 [AP-42 Table 13.2.2-2, 11/06]
 a, Empirical Constant PM₁₀/PM_{2.5} = 0.9 [AP-42 Table 13.2.2-2, 11/06]
 b, Empirical Constant PM - PM_{2.5} = 0.45 [AP-42 Table 13.2.2-2, 11/06]

Emission Factor $EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45} = 3.32 \text{ lbs/VMT}$
 Calculations $(3.32 \text{ lbs/VMT}) * (5 \text{ miles/day}) = 16.59 \text{ lbs/day (uncontrolled)}$
 $(3.32 \text{ lbs/VMT}) * (5 \text{ miles/day}) * (1 - 0.5 C_e) = 8.29 \text{ lbs/day (controlled)}$

V. Existing Air Quality

On July 1, 1987, the U.S. Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedance of the national standards for PM₁₀, the cities of Kalispell (and the nearby Evergreen area), Columbia Falls, Butte, Whitefish, Libby, Missoula, and Thompson Falls were designated by the EPA as nonattainment for PM₁₀. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM₁₀ State Implementation Plans (SIP). The SIPs consisted of emission control plans that controlled fugitive dust emissions from roads, parking lots, construction, and demolition, since technical studies identified these sources to be the major contributors to PM₁₀ emissions.

MAQP #2893-08 and Addendum #8 are for a portable non-metallic mineral processing plant and associated equipment that will potentially operate at sites in or within 10 kilometers (km) of certain PM₁₀ nonattainment areas. The more stringent operating conditions contained in the addendum will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. Also, this facility is a portable source that would operate on an intermittent and temporary basis and any effects on air quality will be minor and short-lived.

VI. Air Quality Impacts

MAQP #2893-08 and Addendum #8 will cover the operations of this portable non-metallic mineral processing plant while operating at any location within Montana, excluding those counties that have a Department approved permitting program. Addendum #8 will cover the operations of this plant, while operating in or within 10 km of any nonattainment area during the summer seasons.

VII. Taking or Damaging Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment (see Section VIII of the Permit Analysis for MAQP #2893-08) and determined there are no taking or damaging implications.

VIII. Environmental Assessment

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

Addendum Analysis Prepared By: D. Kuenzli

Date: May 31, 2012