

AIR QUALITY PERMIT

Issued To: Jim Gilman Excavating, Inc. Permit #1198-02
3099 Grand Ave. Administrative Amendment (AA)
Butte, MT 59701 Received: 3/9/07
Department's Decision on AA: 5/31/07
Permit Final: 6/16/07
AFS #777-1198

An air quality permit, with conditions, is hereby granted to Jim Gilman Excavating, Inc. (Gilman), pursuant to Section 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

Gilman operates a portable batch asphalt plant with attached baghouse and associated equipment, including various generators. The initial site location has been identified as Section 20, Township 3 North, Range 7 West in Silver Bow County, Montana. A list of permitted equipment is included in Section I.A of the Permit Analysis.

Permit #1198-02 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 areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas other than the current location. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM₁₀ nonattainment areas if Gilman moves from the current location.

B. Current Permit Action

On March 9, 2007, the Department received a request from Gilman to administratively amend their permit to clarify that the permitted "associated equipment," including the existing asphalt heater and generators, may be operated at the site. Gilman later requested to limit operations to maintain their synthetic minor status. The permit was also updated to reflect the current language used by the Department. Permit #1198-02 will replace Permit #1198-01.

Section II: Limitations and Conditions

A. Operational

1. Asphalt plant particulate matter emissions shall be limited to 0.10 grains per dry standard cubic foot (gr/dscf) (ARM 17.8.749).
2. Gilman shall not cause or authorize to be discharged into the atmosphere from the asphalt plant stack, any visible emissions that exhibit opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
3. Gilman 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 17.8.304 and ARM 17.8.752).

4. Gilman 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).
5. Gilman shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.752).
6. A baghouse for air pollution control, with a device to measure the pressure drop (magnehelic gauge, manometer, etc.) must be installed and maintained. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained. Pressure drop on the control device and temperature must be recorded daily and kept on site according to Section II.C.2 (ARM 17.8.749).
7. Once a stack test is performed, the asphalt plant production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
8. Plant production shall be limited to 499,320 tons of asphalt during any rolling 12-month period (ARM 17.8.749).
9. Gilman shall operate no more than two diesel generators with a total capacity not to exceed 750 kilowatts (KW) (ARM 17.8.749).
10. Gilman shall limit diesel generator operation to less than a combined total of 4,650 hours on a rolling 12-month period (ARM 17.8.749 and ARM 17.8.1204).
11. Gilman shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart III, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, for any applicable diesel engines (ARM 17.8.340, 40 CFR 60, Subpart III).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Gilman, 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 time period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

B. Emission Testing

1. All source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require testing (ARM 17.8.105).

C. 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 for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made. This Change of Location notice must be published at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Change of Location Form must be submitted to the Department prior to the move. These forms are available from the Department. Once the asphalt plant is moved to another location, the facility shall not operate in the new location for longer than one year (ARM 17.8.765).
2. Gilman shall maintain on-site records showing daily hours of operation, daily production rates, and daily pressure drop and temperature readings for the last 12 months. The records compiled in accordance with this permit shall be maintained by Gilman as a permanent business record for at least 5 years following the date of the measurement, shall be available for inspection by the Department, and shall be submitted to the Department upon request (ARM 17.8.749).
3. Gilman shall document, by month, the production from the asphalt plant. By the 25th day of each month, Gilman shall calculate the monthly production of asphalt during 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).
4. Gilman shall document, by month, the hours of operation of the diesel generator(s). By the 25th day of each month, Gilman shall calculate the hours of operation for the diesel generator(s) 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).
5. Gilman shall supply the Department with annual production information for all emission points, as required by the Department in the 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 Section I.A 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 the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505). Gilman shall submit the following information annually to the Department by March 1 of each year, which may be submitted with the annual emission inventory (ARM 17.8.505):

- a. annual asphalt production
- b. annual hours of diesel generator operation

6. Gilman shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
7. Gilman shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207, and the annual certification shall be submitted with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

Section III: General Conditions

- A. Inspection – Gilman shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Gilman fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Gilman of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756)
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Gilman may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must be begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.
- J. Gilman 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.

PERMIT ANALYSIS
Jim Gilman Excavating, Inc.
Permit # 1198-02

I. Introduction/Process Description

A. Permitted Equipment

Jim Gilman Excavating, Inc. (Gilman) operates a portable asphalt drum-mix plant which includes, but is not limited to, the following equipment:

- 1970 Cedar Rapids Batch drum mix asphalt plant with a natural gas dryer burner (maximum capacity 250 tons per hour (TPH) of asphalt, limited to the maximum production rate during the most recent stack test). The asphalt plant and hydrated lime storage silo are controlled by a baghouse;
- 1994 Childer Asphalt heater (1.75 million British thermal units per hour (MM Btu/hr) natural gas);
- Aggregate handling equipment;
- Asphalt storage silo;
- Two diesel generators with a total capacity not to exceed 750 kilowatts (KW); and
- Associated equipment.

B. Process Description

A typical operation begins by loading the aggregate into hoppers and then conveying it to the rotary dryer. The material is completely dried and conveyed to the pugmill where it is mixed with hot asphalt oil. A baghouse is used to control particulate emissions from the pugmill. The asphalt mixture is loaded into a silo, then loaded into haul trucks and taken to the project site.

C. Permit History

On April 26, 1978, Gilman was issued **Permit #1198-00** for the operation of a portable 1970 Cedar Rapids batch asphalt plant (maximum capacity 250 TPH) with an attached baghouse. The plant was initially located in Section 20, Township 3 North, Range 7 West, in Silver Bow County, Montana.

On October 28, 2000, the Department of Environmental Quality (Department) issued permit modification to update emission factors, update permit language, and establish the appropriate limitations and conditions to keep this facility below the Title V permitting threshold. **Permit #1198-01** replaced Permit #1198-00.

D. Current Permit Action

On March 9, 2007, the Department received a request from Gilman to administratively amend their permit to clarify that the permitted “associated equipment,” including the existing asphalt heater and generators, may be operated at the site. Gilman later requested to limit operations to maintain their synthetic minor status. The permit was also updated to reflect the current language used by the Department. **Permit #1198-02** will replace Permit #1198-01.

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, Sub-Chapter 1, General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule is a list of applicable definitions used in this sub-chapter, unless indicated otherwise in a specific sub-chapter.
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.*, MCA.

Gilman 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. 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. 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 which would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

B. ARM 17.8, Sub-Chapter 2, Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.213 Ambient Air Quality Standard for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Gilman must comply with the applicable ambient air quality standards.

C. ARM 17.8, Sub-Chapter 3, Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule states 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 less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne Particulate Matter (PM). (2) Under this section, Gilman 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 Process. This section 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 section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions.
6. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). 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 Gilman, the portable 1970 Cedar Rapids batch asphalt plant and associated equipment are not currently subject to NSPS (40 CFR Part 60), including:

- o Subpart A General Provisions;

- Subpart I, Standards of Performance of Hot-Mix Asphalt Facilities; and
- Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines – this portable permit is written ‘de minimis friendly,’ which allows Gilman to swap out diesel generators as long as the total does not exceed 750 KW. If a future diesel generator was manufactured after April 1, 2006, or modified or reconstructed after July 11, 2005, then Gilman will be subject to 40 CFR 60, Subpart III.

D. ARM 17.8, Sub-Chapter 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. Gilman shall submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department. This 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 pro-rate the required fee amount.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any asphalt plant, crusher, or screen that has the Potential to Emit (PTE) greater than 15 tons per year of any pollutant. Gillman has a PTE greater than 15 tons per year of PM and particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀), nitrogen oxides (NO_x), and Carbon Monoxide (CO); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis was not required for the current permit action because the permit change is considered an administrative permit change.
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 Gillman 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 one 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, Sub-Chapter 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 sub-chapter.
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 sub-chapter would otherwise allow.

This facility is not a major stationary source because it is not listed and does not have the potential to emit 250 tons per year or more (excluding fugitive emissions) of any air pollutant.

G. ARM 17.8, Sub-Chapter 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
 - c. Sources with the PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ non-attainment 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 #1198-02 for Gilman, the following conclusions were made:

- a. The facility's PTE is less than 100 tons/year for all criteria pollutants due to restrictions placed upon the facility.
- 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 PM₁₀ nonattainment area.
- d. This source is not currently subject to a NSPS.
- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source or a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department has determined that Gilman will be a synthetic minor source of emissions as defined under Title V.

- 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. Best Available Control Technology

A BACT determination is required for each new or altered source. Gilman 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 analysis is not required for this permit modification because there are no new or altered sources being permitted at this time.

IV. Emission Inventory

Tons/Year (Restricted)						
Source	PM	PM ₁₀	NO _x	VOC	CO	SO _x
1970 Cedars Rapid Asphalt Drum Mix Plant with Baghouse	13.48	9.44	6.49	7.99	32.46	0.85
1994 Childer Asphalt Heater (1.75 MMBtu/hr nat gas)	0.04	0.04	0.74	0.04	0.61	0.00
Aggregate Piles	1.61	0.76				
Cold Aggregate Handling (Pile to Bin)	0.02	0.02				
Aggregate Bins, Screening, Conveying	2.34	0.78				
Asphalt Storage (Silo Filling)	0.15	0.15		3.05	0.29	
Asphalt Loadout Into Trucks	0.13	0.13		1.04	0.34	
Two Diesel Generators (total up to 750 KW)	5.07	5.07	72.19	5.88	15.55	4.74
Total Non-Fugitive	22.84	16.39	79.42	18.00	49.25	5.59
Haul Roads	12.68	3.60				
TOTAL - Fugitive & Non-Fugitive	35.52	19.99	79.42	18.00	49.25	5.59

Rotary Drum-Mix Asphalt Plant with Baghouse

1970 Cedars Rapid Asphalt Drum-Mix Plant with Baghouse (SCC 3-05-002-55)
with **Natural Gas Dryer Burner**. Lime Silo vented through baghouse.

Process Rate: 150 ton/hr* 250 ton/hr unrestricted
 Air Flow: 25547 dscfm*
 Hours of operation: 8760 hr/yr
 Restricted Annual Throughput: 499,320 tons/yr 2,190,000 tons/yr unrestricted
 *NOTE: based on Nov 2006 source test info; process rate not allowed to exceed this hourly rate until next source test.

PM Emissions (controlled):

SHORT-TERM

Emission Factor 0.1 gr/DSCF (#1198-02 Permit Limit)
 Calculation 0.1 gr/DSCF * 25547 dscfm* 60 min/hr / 7000 gr/lb = 21.90 lb/hr

LONG-TERM

Emission Factor 0.037 gr/DSCF (Stack Test October 5, 2006)
 Calculation 0.037 gr/DSCF * 25547 dscfm* 60 min/hr/7000 gr/lb = 8.10 lb/hr
 8.1 lb/hr / 150 ton/hr = 0.054 lb/ton
 0.054 lb/ton * 499320 ton/yr * 0.0005 ton/lb = 13.48 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 70% PM (AP-42 Table 11.1-3 3/2004)
 Calculations: 0.7 %PM * 21.9 lb/hr = 15.33 lb/hr
 0.7 %PM * 13.48 ton/yr = 9.44 ton/yr

NO_x Emissions

Emission Factor: 0.026 lb/ton (AP-42 Table 11.1-7 3/2004)
 Calculations: 0.026 lb/ton * 250 ton/hr unrestricted = 6.50 lb/hr
 0.026 lb/ton * 499320 ton/yr * 0.0005 ton/lb = 6.49 ton/yr

VOC Emissions

Emission Factor: 0.032 lb/ton (AP-42 Table 11.1-6 3/2004)
 Calculations: 0.032 lb/ton * 250 ton/hr unrestricted = 8.00 lb/hr
 0.032 lb/ton * 499320 ton/yr * 0.0005 ton/lb = 7.99 ton/yr

CO Emissions

Emission Factor: 0.130 lb/ton (AP-42 Table 11.1-7 3/2004)
 Calculations: 0.13 lb/ton * 250 tons/hr unrestricted = 32.50 lb/hr
 0.13 lb/ton * 499320 ton/yr * 0.0005 ton/lb = 32.46 ton/yr

SO₂ Emissions

Emission Factor: 0.0034 lb/ton (AP-42 Table 11.1-7 3/2004)
 Calculations: 0.0034 lb/ton * 250 ton/hr unrestricted = 0.85 lb/hr
 0.0034 lb/ton * 499320 ton/yr * 0.0005 ton/lb = 0.85 ton/yr

1994 Childer Asphalt Heater (1.75 MMBtu/hr nat gas)

Firing Rate: 1.75 MMBtu/hr 1050 Btu/SCF
 0.0017 MMSCF/hr
 Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 7.6 lb/MMSCF (AP-42 Table 1.4-2, 7/1998)
 Calculations: 7.6 lb/MMSCF * 0.0017 MMSCF/hr = 0.01 lb/hr
 0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 7.6 lb/MMSCF (AP-42 Table 1.4-2, 7/1998)
 Calculations: 7.6 lb/MMSCF * 0.0017 MMSCF/hr = 0.01 lb/hr
 0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04ton/yr

NO_x Emissions

Emission Factor: 100 lb/MMSCF (AP-42 Table 1.4-1, 7/1998)
 Calculations: 100 lb/MMSCF * 0.0017 MMSCF/hr = 0.17 lb/hr
 0.17 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.74 ton/yr

VOC Emissions

Emission Factor: 5.5 lb/MMSCF (AP-42 Table 1.4-2, 7/1998)
 Calculations: 5.5 lb/MMSCF * 0.0017 MMSCF/hr = 0.01 lb/hr
 0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

CO Emissions

Emission Factor: 84 lb/MMSCF (AP-42 Table 1.4-1, 7/1998)
 Calculations: 84 lb/MMSCF * 0.0017 MMSCF/hr = 0.14 lb/hr
 0.14 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.61 ton/yr

SO₂ Emissions

Emission Factor: 0.6 lb/MMSCF (AP-42 Table 1.4-2, 7/1998)
 Calculations: 0.6 lb/MMSCF * 0.0017 MMSCF/hr = 0.001 lb/hr
 0.001 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.004 ton/yr

Material Transfer (SCC 3-05-020-06, controlled)

Aggregate Piles

Process Rate: 250 ton/hr
Number of Piles 2 Piles
Hours of operation: 8760 hr/yr
Restricted Annual Throughput: 499,320 ton/yr

PM Emissions (controlled):

Emission Factor: 0.00322 lbs/ton (AP-42 Section 13.2.4 (1/95))
Calculations: 0.00322 lbs/ton * 250 ton/hr * 2 Piles = 1.61 lb/hr
0.00322 lbs/ton * 499320 ton/yr * 2 Piles * 0.0005 ton/lb = 1.61 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 0.00153 lbs/ton (AP-42 Section 13.2.4 (1/95))
Calculations: 0.00153 lbs/ton * 250 ton/hr * 2 Piles = 0.77 lb/hr
0.00153 lbs/ton * 499320 ton/yr * 2 Piles * 0.0005 ton/lb = 0.76 ton/yr

Cold Aggregate Handling (Pile to Bin)

Process Rate: 250 ton/hr
Number of Transfers 1 Transfer
Hours of operation: 8760 hr/yr
Restricted Annual Throughput: 499,320 ton/yr

PM Emissions (truck unloading):

Emission Factor: 1.00E-04 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.0001 lbs/ton * 250 tons/hr * 1 Transfer = 0.03 lb/hr
0.0001 lbs/ton * 499320 tons/yr * 1 Transfer * 0.0005 ton/lb = 0.02 ton/yr

PM₁₀ Emissions (truck unloading):

Emission Factor: 1.00E-04 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.0001 lbs/ton * 250 ton/hr * 1 Transfers = 0.03 lb/hr
0.0001 lbs/ton * 499320 ton/yr * 1 Transfers * 0.0005 ton/lb = 0.02 ton/yr

Aggregate Bins, Screening, Conveying

Process Rate: 250 ton/hr
Number of Transfers 4 Transfers
Hours of operation: 8760 hr/yr
Restricted Annual Throughput: 499,320 ton/yr

PM Emissions (screening & conveyor, controlled):

Emission Factor: 2.34E-03 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.00234 lbs/ton * 250 ton/hr * 4 Transfers = 2.34 lb/hr
0.00234 lbs/ton * 499320 ton/yr * 4 Transfers * 0.0005 ton/lb = 2.34 ton/yr

PM₁₀ Emissions (screening & conveyor, controlled):

Emission Factor: 7.86E-04 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
Calculations: 0.000786 lbs/ton * 250 ton/hr * 4 Transfers = 0.79 lb/hr
0.000786 lbs/ton * 499320 ton/yr * 4 Transfers * 0.0005 ton/lb = 0.78 ton/yr

Asphalt Storage (Silo Filling)

Process Rate: 250 ton/hr
Hours of operation: 8760 hr/yr
Temperature (T, default) 325 deg F
Asphalt volatility (V, default) -0.5
Restricted Annual Throughput: 499,320 ton/yr

PM Emissions:

Emission Factor: 5.86E-04 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.000586 lbs/ton * 250 ton/hr = 0.15 lb/hr
0.000586 lbs/ton * 499320 ton/yr * 0.0005 tons/lb = 0.15 ton/yr

PM₁₀ Emissions:

Emission Factor: 5.86E-04 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.000586 lbs/ton * 250 ton/hr = 0.15 lb/hr
0.000586 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 0.15 ton/yr

VOC Emissions:

Emission Factor: 1.22E-02 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.0122 lbs/ton * 250 ton/hr = 3.05 lb/hr
0.0122 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 3.05 ton/yr

CO Emissions:

Emission Factor: 1.18E-03 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.00118 lbs/ton * 250 ton/hr = 0.30 lb/hr
0.00118 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 0.29 ton/yr

Asphalt Loadout Into Trucks

Process Rate: 250 ton/hr
Hours of operation: 8760 hr/yr
Temperature (T, default) 325 deg F
Asphalt volatility (V, default) -0.5
Restricted Annual Throughput: 499,320 ton/yr

PM Emissions:

Emission Factor: 5.22E-04 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.000522 lbs/ton * 250 ton/hr = 0.13 lb/hr
0.000522 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 0.13 ton/yr

PM₁₀ Emissions:

Emission Factor: 5.22E-04 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.000522 lbs/ton * 250 ton/hr = 0.13 lb/hr
0.000522 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 0.13 ton/yr

VOC Emissions:

Emission Factor: 4.16E-03 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.00416 lbs/ton * 250 ton/hr = 1.04 lb/hr
0.00416 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 1.04 ton/yr

CO Emissions:

Emission Factor: 1.35E-03 lbs/ton (AP-42 Section 11.1-14, 3/2004)
Calculations: 0.00135 lbs/ton * 250 ton/hr = 0.34 lb/hr
0.00135 lbs/ton * 499320 ton/yr * 0.0005 ton/lb = 0.34 ton/yr

Haul Roads

Vehicle miles traveled (estimate): 5 VMT/day
Control Efficiency is included in Emission Factor

PM Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons): 13.90 lbs/VMT (AP-42 Section 13.2.2 (12/03))
Calculations: 5 VMT/day * 13.90 lbs/VMT = 69.5 lb/day
12.68 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons): 3.95 lbs/VMT (AP-42 Section 13.2.2 (12/03))
Calculations: 5 VMT/day * 3.95 lbs/VMT = 19.75 lb/day
3.60 ton/yr

Two Diesel Generators (total up to 750 KW)

Horsepower = 1006 Hp 1 KW = 1.341 hp
Generator Size = 750 KW 1 Hp-hr = 7000 BTU
BTU/hr = 7.04 MMBTU/hr
Combined Hours of Operation: 4650 hr/yr (*RESTRICTED)

Emission Factors (EF) based on de-minimis-friendly "worst case" EF for generators < 600 HP

PM Emissions

Emission Factor: 0.31 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 0.31 lbs/MMBtu = 2.18 lb/hr
2.18 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 5.07 ton/yr

PM₁₀ Emissions

Emission Factor: 0.31 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 0.31 lbs/MMBtu = 2.18 lb/hr
2.18 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 5.07 ton/yr

NO_x Emissions

Emission Factor: 4.41 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 4.41 lbs/MMBtu = 31.05 lb/hr
31.05 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 72.19 ton/yr

VOC Emissions

Emission Factor: 0.36 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 0.36 lbs/MMBtu = 2.53 lb/hr
2.53 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 5.88 ton/yr

CO Emissions

Emission Factor: 0.95 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 0.95 lbs/MMBtu = 6.69 lb/hr
6.69 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 15.55 ton/yr

SO_x Emissions 0.05 % sulfur

Emission Factor: 0.29 lbs/MMBtu (AP-42, Section 3.3-1, 10/96)
Calculations: 7.04 MMBTU/hr * 0.29 lbs/MMBtu = 2.04 lb/hr
2.04 lb/hr * 4650 hr/yr * 0.0005 ton/lb = 4.74 ton/yr

V. Existing Air Quality

This permit is for a portable asphalt plant to originally be located in Section 20, Township 3 North, Range 7 West, in Silver Bow County, Montana. The area which Gilman has been located since originally permitted is in nonattainment for PM₁₀; however, this permit was originally issued in 1978 and the facility has not been moved. Therefore, this facility is permitted without an Addendum for operation in the existing site location.

VI. Air Quality Impacts

This permit is for a portable asphalt plant. The amount of controlled particulate emissions generated by this project should not cause concentrations of PM₁₀ in the ambient air that exceed any set standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department has conducted a private property taking and damaging assessment and has determined there are no taking or damaging implications.

VIII. Environmental Assessment

An environmental assessment was not required for the current permit action because it is considered an administrative action, with no new or altered sources being addressed.

Analysis prepared by: Christine Weaver
Date: April 4, 2007