

AIR QUALITY PERMIT

Issued To: Jim Gilman Excavating, Inc.
3099 Grand Ave.
Butte, MT 59701

Permit #2543-03
Administrative Amendment (AA)
Received: 3/9/07
Department's Decision on AA: 5/31/07
Permit Final: 6/16/07
AFS #777-2543

An air quality permit, with conditions, is granted to Jim Gilman Excavating, Inc. (Gilman) 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:

Gilman owns a portable asphalt plant that may operate at various locations throughout Montana. The facility is currently located at Section 23, Township 5 North, Range 2 East in Broadwater County. For a complete list of equipment, see Section IA of the permit analysis.

Permit #2543-03 applies while operating at any location in Montana, except those areas having a Department of Environmental Quality (Department) approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM₁₀ nonattainment areas.

B. Current Permit Action

On March 9, 2007, the Department received a request from Gilman to administratively amend their permit to specifically identify the existing asphalt heater and various generators currently permitted as "associated equipment," and to replace the current permit condition expressed in hours per year to an equivalent production limit.

Gilman specifically requested that the Department update the permit to reflect:

- The replacement of the 1983/1984 Barber Green DM-71 drum with a 2002 Gencore Ultradrums. The existing Hauck Star Jet asphalt dryer burner remains unchanged;
- Specific identification of the existing 20 gallons per hour (GPH) asphalt cement hot oil heater;
- Allowance for "de minimis friendly" operation of up to three diesel generators with a combined total not to exceed 1000 kilowatts (kW). The previous limit of 254,000 gallons per year of diesel fuel has been revised to reflect the equivalent restriction of 3,700 hours of operation per year.

Gilman later requested to limit operations to maintain their Title V synthetic minor status. **Permit #2543-03** will replace Permit #2543-02.

Section II: Limitations and Conditions

A. Emission and Operational Limitations

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340 and 40 CFR 60 Subpart I).
2. Gilman shall be limited to a maximum of 576,600 tons of asphalt production during any 12-month rolling period (ARM 17.8.749 and ARM 17.8.1204).
3. Gilman shall operate no more than three diesel generators with a total capacity not to exceed 1000 kW (ARM 17.8.749).
4. Gilman shall limit the three diesel generators to a maximum of 3,700 combined hours of operation during any 12-month rolling period (ARM 17.8.749 and ARM 17.8.1204).
5. Gilman shall not cause or authorize to be discharged into the atmosphere from the asphalt plant stack emissions that exhibit 20% opacity or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).
6. 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 17.8.308 and ARM 17.8.752).
7. 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 and ARM 17.8.752).
8. Gilman shall treat all unpaved portions of the haul roads, access roads, and 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.7 (ARM 17.8.752).
9. A device to measure the pressure drop (magnehelic gauge, manometer, etc.) on the control device (baghouse) must be installed and maintained. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained (ARM 17.8.749).
10. Once a stack test is performed, the asphalt production rate shall be limited to the average production rate during the last source test demonstrating compliance (ARM 17.8.749).
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 I, *Standards of Performance for Hot Mix Asphalt Facilities*, for any applicable equipment (ARM 17.8.340, 40 CFR 60, Subpart I).

12. Gilman shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, for any applicable diesel engines (ARM 17.8.340, 40 CFR 60, Subpart IIII).
13. 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 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).

B. Emission Testing

1. An EPA Methods 1-5, and 9 source test must be performed on the asphalt plant every four years after the initial source test to demonstrate compliance with the conditions specified in Section II.A.1 and 5. The last source test took place on April 28, 2004 (ARM 17.8.105 and ARM 17.8.749).
2. Pressure drop on the control device and temperature must be recorded daily and kept on site according to Section II.C.4 (ARM 17.8.749).
3. Pressure drop on the control device and temperatures must be recorded during the test and reported as part of the test results (ARM 17.8.749).
4. All source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
5. Since asphalt production will be limited to the average production rate during the test, it is suggested the test be performed at the highest production rate practical (ARM 17.8.749).
6. Gilman may retest at any time in order to test at a higher production rate (ARM 17.8.749).
7. The Department may require further 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 more than 1 year (ARM 17.8.765).
2. Gilman 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 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 units as required by the Department (ARM 17.8.505). 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 must be submitted with the annual emission inventory (ARM 17.8.505):

- annual asphalt production
 - annual hours of operation for all diesel engines
3. 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(l)(d) (ARM 17.8.745).
 4. Gilman shall maintain on-site records showing daily hours of operation, daily production rates, and daily pressure drop and temperature readings for the last twelve (12) months. The records compiled in accordance with this permit shall be maintained by Gilman as a permanent business record for at least five (5) years following the date of the measurement, shall be submitted to the Department upon request, and shall be available at the plant for inspection by the Department (ARM 17.8.749).
 5. Gilman shall document, by month, total asphalt production from the 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.3. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
 6. Gilman shall document, by month, the hours of operation of the diesel generator(s). By the 25th day of each month, Gilman shall total the generator hours of operation for the diesel generators for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.4. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
 7. Gilman shall annually certify that its emissions are less than those that would require the facility to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

Section III: General Conditions

- A. Inspection – 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 (ie: CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if 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 #2543-03

I. Introduction/Process Description

Gilman Excavating, Inc. (Gilman) owns and operates a portable asphalt plant operated at various locations around Montana.

A. Permitted Equipment

Gilman operates a portable asphalt plant with a maximum production rate of approximately 450 tons per hour (TPH). The plant includes the following equipment:

- 2002 Gencore Ultradrums Portable drum installed in 2007. Nominal capacity rated @ 400 TPH, potential to operate up to 450 TPH; limited to the maximum production rate during the most recent stack test. The asphalt is heated by a Hawk Star Jet diesel-fired drum mix drier (existing).
- 1994 Dusteater Baghouse to control particulate emissions from the asphalt plant and hydrated lime storage silo;
- CEI 2000A Diesel-fired asphalt heater, rated at 20 gallons per hour (GPH);
- Aggregate handling equipment;
- Asphalt storage silo;
- Diesel generators – up to 3 generators for a total of 1000 kilowatt (kW); and
- Associated equipment.

B. Source 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 mixed with hot asphalt oil. A baghouse is used to control particulate emissions. The asphalt mixture is loaded into a silo, then loaded into haul trucks and taken to the project site.

C. Permit History

On April 10, 1989, Gilman was issued **Permit #2543-00** to operate a portable 1983 Barber Greene DM-71 (9'X36') Drum Mix Asphalt Plant (maximum production rate of 372 TPH), serial #DM71X403 and associated equipment. The plant operates at various locations in Montana.

On September 6, 1997, Gilman submitted a request to modify Permit #2543-00. The modification included an addendum to allow for summer operation in or within 10 kilometer (km) of certain Montana Particulate Matter with an Aerodynamic Diameter of Ten Microns or Less (PM₁₀) non-attainment areas (NAA). In addition, an hourly operation limit was added to the permit to allow the facility to stay below the Prevention of Significant Deterioration (PSD) and Title V operating permit threshold levels. A review was conducted during the original permit issuance, but the Department failed to consider carbon monoxide (CO) emissions. **Permit #2543-01** replaced Permit #2543-00.

On August 13, 1999, Gilman submitted a request to modify permit condition II.A.3

to reflect an asphalt production limit rather than an hourly operational limit. In addition, Permit #2543-01 did not include, in the emission inventory, potential emissions from the diesel generator used to power the permitted asphalt plant. Therefore, potential emissions from the diesel generator (1000 kW) were included in the analysis to Permit #2543-02 and a diesel consumption limit was added to current permit conditions. The asphalt production limit and the diesel consumption limit were included so that Gilman will stay below Title V operating permit threshold levels. **Permit #2543-02** replaces Permit #2543-01.

D. Current Permit Action

On March 9, 2007, the Department of Environmental Quality (Department) received a request from Gilman to administratively amend their permit to specifically identify the existing asphalt heater and various generators currently permitted as “associated equipment,” and to replace the current permit condition expressed in hours per year to an equivalent production limit.

Gilman specifically requested that the Department update the permit to reflect:

- The replacement of the 1983/1984 Barber Green DM-71 drum (500 TPH capacity) with a 2002 Gencore Ultradrums (nominal rating of 400 TPH capacity, with the potential to operate up to 450 TPH). The existing Hauck Star Jet asphalt dryer burner remains unchanged;
- Specific identification of the existing 20 gallons per hour (GPH) asphalt cement hot oil heater;
- Allowance for “de minimis friendly” operation of diesel generators with a restriction on annual hour of operation, rather than fuel consumption. The current permit allowed for one generator not to exceed 1000 kW, which has been changed to allow up to 3 diesel generators with a combined total not to exceed 1000 kW. The previous limit of 254,000 gallons per year of diesel fuel has been revised to reflect the equivalent restriction of 3,700 hours of operation per year.

Gilman later requested to limit operations to maintain their synthetic minor status. **Permit #2543-03** will replace Permit #2543-02.

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 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. The Department has determined for the current permit action that testing every 4 years is necessary.

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 phone 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.

The following ambient air quality standards or requirements may apply, 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 Standards for Settled Particulate Matter; and
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Standards 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 requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) 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. (2) Under this rule, 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 rule requires a limitation of particulate emissions caused by the combustion of fuel which is to be discharged from any stack or chimney into the atmosphere in excess of the hourly rate outlined in this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires a limitation of particulate emissions be calculated using the process weight rule. Total allowable particulate emissions shall be determined using the maximum thru-put rates supplied in the permit application.
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. The commercial grade propane gas burned in the new drum dryer contains a negligible amount of sulfur compounds. Therefore, this unit will be in compliance with this rule.
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 drum mix asphalt plant and associated equipment are subject to NSPS (40 CFR Part 60), including:

- Subpart A General Provisions;
- Subpart I, Standards of Performance of Hot Mix Asphalt Facilities;
- 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 1000 kW. If the facility’s diesel generators are manufactured after April 1, 2006, or modified, or reconstructed after July 11, 2005, then Gilman is 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. Gilman was not required to submit an application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by

each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; and the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

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

- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any asphalt plant, crusher or screen that has the potential to emit (PTE) greater than 15 tons per year of any pollutant. Gilman has a PTE greater than 15 tons per year of oxides of nitrogen (NO_x), CO, volatile organic compound (VOC), and PM and PM₁₀; 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 Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of the 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 Gilman of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

15. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of Intent to Transfer location, the facility will operate in the new location for less than 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.
16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215, Montana Code Annotated (MCA).

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

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule, or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #2543-03 for Gilman, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant due to restrictions placed upon the facility.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.

- c. This source is not located in a serious PM₁₀ nonattainment area.
- d. This facility is subject to current NSPS, including 40 CFR 60, Subpart I.
- e. This facility is not subject to any current National Emission Standards for Hazardous Air pollutants (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 is not subject to the Title V Operating Permit Program. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, Gilman will be required to obtain a Title V Operating Permit.

- h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.
 - i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.
 - ii. Any source that obtains a federally enforceable limit on PTE shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

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

III. BACT Determination

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

IV. Emission Inventory--Permit #2543-03

Source	PM	Tons/Year (Restricted)				CO	SOx
		PM-10	NOx	VOC			
2002 Gencore Ultradrums Asphalt Drum Mix Plant							
with Diesel Burner & Baghouse	2.71	1.90	15.84	9.22	37.44	3.17	
Asphalt Heater (20 GPH #2 diesel)	0.31	0.31	1.75	0.04	0.44	0.61	
Aggregate Piles	1.85	0.88					
Cold Aggregate Handling (Pile to Bin)	0.03	0.03					
Aggregate Bins, Screening, Conveying	2.70	0.91					
Asphalt Storage (Silo Filling)	0.17	0.17		3.51	0.34		
Asphalt Loadout Into Trucks	0.15	0.15		1.20	0.39		
Three Diesel Generators (up to 1000 kW)	5.38	5.38	76.61	6.25	16.50	5.03	
Total Non-Fugitive	13.30	9.73	94.20	20.22	55.11	8.81	
Haul Roads	12.68	3.60					
TOTAL - Fugitive & Non-Fugitive	25.98	13.33	94.20	20.22	55.11	8.81	

Rotary Drum Mix Asphalt Plant with Baghouse

2002 Gencore Ultradrums Asphalt Drum Mix Plant with Baghouse

Diesel Dryer Burner (not replaced in 2007)

Process Rate:	452 TPH*	450 TPH unrestricted**
Air Flow:	27,394 dscfm	
Hours of operation:	8760 hr/yr	
Restricted Annual Throughput:	576,000 ton/yr***	

*hourly restriction based on April 28, 2004 source test of 1983 Barber Greene; process rate not allowed to exceed this hourly rate.

** 1983/1984 Barber Greene Asphalt drum mix plant replaced by 2002 Gencore Drum in 2007

***annual restriction based on permit

PM Emissions (controlled):

Emission Factor	0.04 gr/DSCF	[#2543-02 Permit Limit]	
Calculations:	0.04 gr/DSCF * 27394 dscfm * 60 min/hr / 7000 gr/lb =		9.39 lb/hr
	0.021 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		6.05 ton/yr

OR

Emission Factor:	0.018 gr/DSCF	[Stack Test April 28, 2004]	
Calculations:	0.018 gr/DSCF * 27394 dscfm * 60 min/hr / 7000 gr/lb =		4.23 lb/hr
	4.23 lbs/hr / 452 TPH =		0.0094 lb/ton
	0.0094 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		2.71 ton/yr

PM-10 Emissions (controlled):

Emission Factor:	70 %PM	(AP-42 Table 11.1-3 3/2004)	
Calculations:	70 %PM * 9.39 lb/hr =		6.57 lb/hr
	70 %PM * 2.71 ton/yr =		1.90 ton/yr

NO_x Emissions

Emission Factor:	0.055 lb/ton	(AP-42 Table 11.1-7 3/2004)	
Calculations:	0.055 lb/ton * 450 TPH unrestricted =		24.75 lb/hr
	0.055 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		15.84 ton/yr

VOC Emissions

Emission Factor:	0.032 lb/ton	(AP-42 Table 11.1-8 3/2004)	
Calculations:	0.032 lb/ton * 450 TPH unrestricted =		14.40 lb/hr
	0.032 lb/ton * 576000 ton/yr * 0.0005 tons/lb =		9.22 ton/yr

CO Emissions

Emission Factor:	0.130 lb/ton	(AP-42 Table 11.1-7 3/2004)	
Calculations:	0.13 lb/ton * 450 TPH unrestricted =		58.50 lb/hr
	0.13 lb/ton * 576000 ton/yr * 0.0005 tons/lb =		37.44 ton/yr

SO₂ Emissions

Emission Factor:	0.011 lb/ton	(AP-42 Table 11.1-7 3/2004)	
Calculations:	0.011 lb/ton * 450 TPH unrestricted =		4.95 lb/hr
	0.011 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		3.17 ton/yr

Asphalt Heater (20 GPH #2 diesel)

Firing Rate: 20 GPH
Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor:	3.3 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	3.3 lb/10 ³ gal * 20 GPH / 1000 gal =		0.07 lb/hr
	0.07 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.31 ton/yr

PM-10 Emissions (controlled):

Emission Factor:	3.3 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	3.3 lb/10 ³ gal * 20 GPH / 1000 gal =		0.07 lb/hr
	0.07 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.31 ton/yr

NO_x Emissions

Emission Factor:	20 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	20 lb/10 ³ gal * 20 GPH / 1000 gal =		0.40 lb/hr
	0.4 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		1.75 ton/yr

VOC Emissions

Emission Factor:	0.34 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	0.34 lb/10 ³ gal * 20 GPH / 1000 gal =		0.01 lb/hr
	0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.04 ton/yr

CO Emissions

Emission Factor:	5 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	5 lb/10 ³ gal * 20 GPH / 1000 gal =		0.10 lb/hr
	0.1 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.44 ton/yr

SO₂ Emissions Assumes Diesel @ 0.05% sulfur

Emission Factor:	7.1 lb/10 ³ gal	(AP-42 Table 1.3-1, 9/1998)	
Calculations:	7.1 lb/10 ³ gal * 20 GPH / 1000 gal =		0.14 lb/hr
	0.14 lb/hr * 8760 hr/yr * 0.0005 ton/lb =		0.61 ton/yr

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

Aggregate Piles

Process Rate:	452 TPH	450 TPH Unrestricted
Number of Piles	2 Piles	
Hours of operation:	8760 hr/yr	
Restricted Annual Throughput:	576,000 ton/yr	

PM Emissions (controlled):

Emission Factor:	0.00322 lb/ton	(AP-42 Section 13.2.4, 1/95))	
Calculations:	0.00322 lb/ton * 450 TPH Unrestricted * 2 Piles =		2.90 lbs/hr
	0.00322 lb/ton * 576000 ton/yr * 2 piles * 0.0005 ton/lb =		1.85 ton/yr

PM-10 Emissions (controlled):

Emission Factor:	0.00153 lb/ton	(AP-42 Section 13.2.4, 1/95))	
Calculations:	0.00153 lb/ton * 450 TPH Unrestricted * 2 Piles =		1.38 lb/hr
	0.00153 lb/ton * 576000 ton/yr * 2 pile * 0.0005 ton/lb =		0.88 ton/yr

Cold Aggregate Handling (Pile to Bin)

Process Rate:	452 tons/hr	450 TPH Unrestricted
Number of Transfers	1 Transfer	
Hours of operation:	8760 hr/yr	
Restricted Annual Throughput:	576,000 ton/yr	

PM Emissions (truck unloading):

Emission Factor:	0.0001 lb/ton	(AP-42 Section 11.19.2-2, 8/2004)	
Calculations:	0.0001 lb/ton * 450 TPH Unrestricted * 1 Transfers =		0.05 lb/hr
	0.0001 lb/ton * 576000 tons/yr * 1 Transfer * 0.0005 ton/lb =		0.03 ton/yr

PM-10 Emissions (truck unloading):

Emission Factor:	1.00E-04 lb/ton	(AP-42 Section 11.19.2-2, 8/2004)	
Calculations:	0.0001 lb/ton * 450 TPH Unrestricted * 1 Transfers =		0.05 lb/hr
	0.0001 lb/ton * 576000 ton/yr * 1 Transfers * 0.0005 ton/lb =		0.03 ton/yr

Aggregate Bins, Screening, Conveying

Process Rate:	452 ton/hr	450 TPH Unrestricted
Number of Transfers	4 Transfers	
Hours of operation:	8760 hr/yr	
Restricted Annual Throughput:	576,000 tons/yr	

PM Emissions (screening & conveyor, controlled):

Emission Factor:	2.34E-03 lb/ton	(AP-42 Section 11.19.2-2, 8/2004)	
Calculations:	0.00234 lb/ton * 450 TPH Unrestricted * 4 Transfers =		4.21lb/hr
	0.00234 lb/ton * 576000 tons/yr * 4 Transfers * 0.0005 ton/lb =		2.70 ton/yr

PM-10 Emissions (screening & conveyor, controlled):

Emission Factor:	7.86E-04 lb/ton	(AP-42 Section 11.19.2-2, 8/2004)	
Calculations:	0.000786 lb/ton * 450 TPH Unrestricted * 4 Transfers =		1.41 lbs/hr
	0.000786 lb/ton * 576000 ton/yr * 4 Transfers * 0.0005 ton/lb =		0.91 ton/yr

Asphalt Storage (Silo Filling)

Process Rate:	452 ton/hr	450 TPH Unrestricted
Hours of operation:	8760 hr/yr	
Temperature (T, default)	325 deg F	
Asphalt volatility (V, default)	-0.5	
Restricted Annual Throughput:	576,000 ton/yr	

PM Emissions:

Emission Factor:	5.86E-04 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.000586 lb/ton * 450 TPH Unrestricted =		0.26 lb/hr
	0.000586 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.17 ton/yr

PM-10 Emissions:

Emission Factor:	5.86E-04 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.000586 lb/ton * 450 TPH Unrestricted =		0.26 lb/hr
	0.000586 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.17 ton/yr

VOC Emissions:

Emission Factor:	1.22E-02 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.0122 lb/ton * 450 TPH Unrestricted =		5.49 lb/hr
	0.0122 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		3.51 ton/yr

CO Emissions:

Emission Factor:	1.18E-03 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.00118 lb/ton * 450 TPH Unrestricted =		0.53 lb/hr
	0.00118 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.34 ton/yr

Asphalt Loadout Into Trucks

Process Rate:	452 ton/hr	450 TPH Unrestricted
Hours of operation:	8760 hr/yr	
Temperature (T, default)	325 deg F	
Asphalt volatility (V, default)	-0.5	
Restricted Annual Throughput:	576,000 ton/yr	

PM Emissions:

Emission Factor:	5.22E-04 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.000522 lb/ton * 450 TPH Unrestricted =		0.23 lb/hr
	0.000522 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.15 ton/yr

PM-10 Emissions:

Emission Factor:	5.22E-04 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.000522 lb/ton * 450 TPH Unrestricted =		0.23 lb/hr
	0.000522 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.15 ton/yr

VOC Emissions:

Emission Factor:	4.16E-03 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.00416 lb/ton * 450 TPH Unrestricted =		1.87 lb/hr
	0.00416 lb/ton * 576000 ton/yr * 0.0005 ton/lb = 1.20 ton/yr		

CO Emissions:

Emission Factor:	1.35E-03 lb/ton	(AP-42 Section 11.1-14, 3/2004)	
Calculations:	0.00135 lb/ton * 450 TPH Unrestricted =		0.61 lb/hr
	0.00135 lb/ton * 576000 ton/yr * 0.0005 ton/lb =		0.39 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 Lb/VMT =		69.5 lb/day
			12.68 ton/yr

PM-10 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 Lb/VMT	19.75 lb/day 3.60 ton/yr

Three Diesel Generators (up to 1000 kW)

Horsepower =	1341 Hp	1 kW = 1.341hp
Generator Size =	1000 kW	1 Hp-hr = 7000 Btu
BTU/hr =	9.39 MMBtu/hr	
Hours of Operation:	3,700 hr/yr	(equivalent to 248,164 gal/yr)

PM Emissions

Emission Factor:	0.31 lbs/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBtu/hr * 0.31 lbs/MMBtu =		2.91 lb/hr
	2.91 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		5.38 ton/yr

PM-10 Emissions

Emission Factor:	0.31 lbs/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBtu/hr * 0.31 lbs/MMBtu =		2.91 lb/hr
	2.91 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		5.38 ton/yr

NO_x Emissions

Emission Factor:	4.41 lbs/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBTU/hr * 4.41 lbs/MMBtu =		41.41 lb/hr
	41.41 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		76.61 ton/yr

VOC Emissions

Emission Factor:	0.36 lbs/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBtu/hr * 0.36 lbs/MMBtu =		3.38 lb/hr
	3.38 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		6.25 ton/yr

CO Emissions

Emission Factor:	0.95 lb/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBtu/hr * 0.95 lbs/MMBtu =		8.92 lb/hr
	8.92 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		16.50 ton/yr

SO_x Emissions 0.05 % sulfur

Emission Factor:	0.29 lb/MMBtu	(AP-42, 3.3-1, 10/96)	
Calculations:	9.39 MMBtu/hr * 0.29 lbs/MMBtu =		2.72 lb/hr
	2.72 lb/hr * 3700 hr/yr * 0.0005 ton/lb =		5.03 ton/yr

V. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM₁₀. Due to exceedances 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 EPA as nonattainment for PM₁₀. As a result of this designation, EPA required the Department and the City-County Health Departments 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 determined these sources to be the major contributors to PM₁₀ emissions.

An addendum will be required if Gilman wants to operate Permit #2543-03 in or within 10 km of

a PM₁₀ nonattainment area.

VI. Air Quality Impacts

This permit is for a portable asphalt plant located in various locations around Montana. In the view of the Department, the amount of controlled particulate emissions generated by this project will not cause concentrations of PM₁₀ in the ambient air that exceed the set standard. In addition, this source is portable and any air quality impacts will be minimal.

VII. Takings or Damaging Implication Analysis

As required by 2-10-101 through 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

The current permit action is a modification not involving the addition of any new or altered sources; therefore, because the current permit action is considered an administrative action, an environmental assessment is not required.

Analysis prepared by: Christine Weaver
Date: April 6, 2007