AIR QUALITY PERMIT

Issued To: LHC, Inc.
P.O. Box 7338
Kalispell, MT 59904

Permit #3391-02
Administrative Amendment (AA)
Received: 5/30/07
Department Decision on AA: 6/27/07
Permit Final: 7/13/07
AFS #777-3391

An air quality permit, with conditions, is hereby granted to LHC, Inc. (LHC), 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

LHC operates a portable drum-mix asphalt plant and associated equipment. Permit #3391-02 applies while operating at any location within Montana, except within those areas having a Department of Environmental Quality (Department)-approved permitting program, or those areas considered to be tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum 3 and Permit #3391-02 apply to the LHC facility while operating at specific locations in or within 10 km of certain PM_{10} nonattainment areas during the winter months, as approved by the Department, and at any location in or within 10 km of any PM_{10} nonattainment areas during the summer months. A list of permitted equipment is included in Section I.A of the Permit Analysis.

B. Current Permit Action

On May 30, 2007, the Department received a request from LHC for an administrative amendment to Permit #3391-01 and Addendum 2. Specifically, LHC proposed the addition of enforceable conditions requiring the installation and operation of additional particulate control measures for the 4-bin cold aggregate feed system for wintertime operations in the Kalispell PM_{10} nonattainment area. Further, the Department updated the emission inventory for the permitted facility to reflect up-to-date published emission factors for hot-mix asphalt plants and updated Addendum 2 to reflect current Department modeling guidance for portable or temporary sources operating in or within 10 km of certain PM_{10} nonattaiment areas during the winter season.

Section II: Conditions and Limitations

A. Emission Limitations

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

2. LHC 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 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

3. LHC 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 an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340, ARM 17.8.752, and 40 CFR 60, Subpart I).

4. LHC 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).

5. LHC 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 on the asphalt drum and lime silo. Pressure drop must be measured in inches of water. Temperature indicators at the control device inlet and outlet must be installed and maintained (ARM 17.8.752).

7. 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).

8. LHC shall only use propane, natural gas, fuel oil, or on-specification waste oil to fire the hot-mix dryer (ARM 17.8.749).

9. Asphalt plant production shall not exceed 1,182,500 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

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

11. LHC shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR Part 60, Subpart I (ARM 17.8.340 and 40 CFR 60, Subpart I).

B. Testing Requirements

1. Methods 1-5 and 9 source tests shall be performed on the asphalt plant on an every four-year basis, or according to another testing/monitoring schedule as may be approved by the Department, in order to demonstrate compliance with the limits contained in Sections II.A.1, II.A.2, and II.A.3 (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.2 (ARM 17.8.749).

3. Pressure drop on the control device and temperatures must be recorded during the compliance source test and reported as part of the test results (ARM 17.8.749).

4. LHC may retest at any time in order to test at a higher production rate (ARM 17.8.749).

5. Since asphalt production will be limited to the average production rate during the compliance source test, it is suggested the test be performed at the highest production rate practical (ARM 17.8.749).

6. All compliance source tests must be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

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

C. Operational Reporting Requirements

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

2. LHC 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 LHC as a permanent business record for at least five years following the date of the measurement, must be available at the plant for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

3. LHC 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 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).

4. LHC 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. This notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745 (1)(d) (ARM 17.8.745).
5. LHC shall document, by month, the asphalt production from the facility. By the

25th day of each month, LHC shall calculate the asphalt production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.9. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. LHC 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. The annual certification shall be submitted with the annual emissions inventory information (ARM 17.8.1204).

Section III: Addendum 3

LHC shall comply with all conditions in Addendum 3 to Permit #3391-02 when operating in or within 10 km of certain PM_{10} nonattainment areas as described in Addendum 3 (ARM 17.8.749).

Section IV: General Conditions

A. Inspection - LHC shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if LHC fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving LHC 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. Permit Fee - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature,

failure to pay the annual operation fee by LHC 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 begin within three 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. LHC shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas having a Department-approved permitting program.

PERMIT ANALYSIS
LHC, Inc.
Permit #3391-02

I. Introduction/Process Description

A. Permitted Equipment

LHC, Inc., (LHC) owns and operates a portable drum-mix asphalt plant. Equipment used at the facility includes a 2005 ADM drum-mix asphalt plant (up to 220 tons per hour (TPH)) with a baghouse, a 4-bin cold aggregate feed system, a lime silo, an asphalt product silo, and associated equipment.

B. Source Description

For a typical operational set-up, stockpiled aggregate is loaded into the cold feeder. The aggregate is dispensed from the bins, and dumped onto feeder conveyors that transfer the aggregate to the drum-mix dryer. The aggregate travels through the rotating drum where asphalt oil and lime is added to the dryer. The dryer drum mixes the asphalt oil, lime, and the aggregate. The resulting hot-mix asphalt is loaded into a hot-mix asphalt storage silo where it is stored until the asphalt is dumped into trucks for transport to the project site.

C. Permit History

On April 23, 2004, LHC was issued **Permit #3391-00** and **Addendum 1** to allow for summertime operations of a portable drum-mix asphalt plant. Facility operations were permitted for summertime operations at various locations in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas and various PM_{10} attainment areas throughout the state.

On August 4, 2005, the Montana Department of Environmental Quality (Department) received a request from LHC to update Permit #3391-00 and Addendum 1, to allow for wintertime operations in the Kalispell PM_{10} nonattainment area. Subsequently, on August 24, 2005, LHC requested credit for controls on the cold aggregate handling portion of the facility. The permit was also updated to use current permit language and rule references used by the Department. **Permit #3391-01** replaced Permit #3391-00 and **Addendum 2** replaced Addendum 1.

D. Current Permit Action

On May 30, 2007, the Department received a request from LHC for an administrative amendment to Permit #3391-01 and Addendum 2. Specifically, LHC proposed the addition of enforceable conditions requiring the installation and operation of additional particulate control measures for the 4-bin cold aggregate feed system for wintertime operations in the Kalispell PM_{10} nonattainment area. Further, the Department updated the emission inventory for the permitted facility to reflect up-to-date published emission factors for hot-mix asphalt plants and updated Addendum 2 to reflect current Department modeling guidance for portable or temporary sources operating in or within 10 km of certain PM_{10} nonattaiment areas during the winter season. **Permit #3391-02** replaces Permit #3391-01 and **Addendum 3** replaces Addendum 2.

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq*., Montana Code Annotated (MCA).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than four hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 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 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
5. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

LHC must maintain compliance with the applicable ambient air quality standards.

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 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. (2) Under this rule, LHC 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 Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.

6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility includes NSPS affected equipment as defined in 40 CFR Part 60, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities). Therefore, the facility is subject to the requirements of 40 CFR Part 60, Subpart I.

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 LHC 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. The current permit action is an administrative amendment and does not require a permit application or an application fee.

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 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 that pro-rate the required fee amount.

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

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit 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. LHC has a PTE greater than 15 tons per year of particulate matter (PM), particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur dioxide (SO_2); 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 Permit--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that are not subject to the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. 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 amendment. (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. The current permit action is considered an administrative action and does not require public notice.

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 current permit action is considered administrative and does not require a BACT analysis and determination.

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 LHC 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 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.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM

17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an 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 one year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major 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 (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 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3391-02 for LHC, the following conclusions were made:

   a. The facility's allowable PTE is less than 100 tons/year for any criteria pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.

   c. This source is not located in a serious PM_{10} nonattainment area.

d. This facility is subject to current NSPS standards (40 CFR Part 60, Subpart I).

e. This facility is not subject to any current National Emission Standards for Hazardous Air Pollutants (NESHAP).

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 LHC is a synthetic minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, LHC may be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or altered source. LHC shall install on the new or altered source the maximum air pollution control capability that 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 an administrative amendment.

IV. Emission Inventory

	ton/yr					
Emitting Unit	**PM**	**PM_{10}**	**NO_x**	**CO**	**VOC**	**SO_x**
Drum Mix Asphalt Plant Dryer	21.48	13.60	32.52	76.86	18.92	34.29
Hot Oil Heater	0.00	0.00	0.00	0.06	0.00	0.00
Drum Mix Plant Asphalt Load-Out	0.50	0.33	0.00	1.30	4.01	0.00
Asphalt Product Silo Filing	0.57	0.24	0.00	1.14	11.75	0.00
Cold Aggregate Screens and Storage Bins	10.41	6.36	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	11.56	4.24	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	6.38	3.03	0.00	0.00	0.00	0.00
Lime Silo Bin Vent	0.75	0.75	0.00	0.00	0.00	0.00
Haul Roads/Vehicle Traffic	12.68	3.60	0.00	0.00	0.00	0.00
Total	**64.33**	**32.15**	**32.62**	**79.36**	**34.67**	**34.29**

Emission Calculations

Drum-Mix Asphalt Plant Dryer

Operating Parameters:

Operating Hours:	5375 hr/yr (Permit Limit through Asphalt Production Limit)
Plant Elevation:	3500 ft. (General Assumption for Portable Plant)
Standard Pressure:	29.92 inches Hg
Actual Pressure:	26.42 inches Hg (approximation: subtract 1 inch for each 1000 ft of rise in elevation)
Flow-Rate:	38,000 acfm (Similar Source Information)
Standard Temperature:	20ºC 68ºF 528ºR
Assumed Stack Temp:	149ºC 300ºF 760ºR
Corrected Flow-Rate:	38,000 acfm (26.42 in. Hg / 29.92 in. Hg) (528ºR / 760ºR) = 23,312 dscfm
Process Rate:	220 ton/hr (Company Information)

PM Emissions

Emission Factor:	0.04 gr/dscf (BACT Limit)
Calculations:	0.04 gr/dscf * 23312 dscfm * 1 lb/7000 gr * 60 min/hr = 7.99 lb/hr

7.99 lb/hr * 5375 hr/yr * 0.0005 ton/lb = 15.29 ton/yr

PM_{10} Emissions

Emission Factor: 0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.023 lb/ton * 220 ton/hr * 5375 hr/yr * 0.0005 ton/lb = 13.60 ton/yr

NOx Emissions

Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.055 lb/ton * 220 ton/hr * 5375 hr/yr * 0.0005 ton/lb = 32.52 ton/yr

CO Emissions

Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.13 lb/ton * 220 ton/hr * 5375 hr/yr * 0.0005 ton/lb = 76.86 ton/yr

VOC Emissions

Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.032 lb/ton * 220 ton/hr * 5375 hr/yr * 0.0005 ton/lb = 18.92 ton/yr

SOx Emissions

Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.058 lb/ton * 220 ton/hr * 5375 hr/yr * 0.0005 ton/lb = 34.29 ton/yr

Hot Oil Heater

Operating Parameters:
Natural Gas Consumption: 1.5 MMBtu/hr (Company Information)
0.00105 MMBtu/scf (AP-42, Appendix A)
Operating Hours: 8760 hr/yr (Annual Capacity)
Calculation: 1.5 MMBtu/hr / 0.00105 MMBtu/scf * 8760 hr/yr = 12,514,286 scf/yr

CO Emissions

Emission Factor: 8.90E-06 lb/scf (AP-42, Section 11.1, Table 11.1-13, Diesel Fuel, 3/04)
Calculations: 8.90E-06 lb/scf * 12,514,286 scf/yr * 0.0005 ton/lb = 0.06 ton/yr

Drum-Mix Plant Asphalt Load-Out

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.00052 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00052 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.50 ton/yr

PM_{10} Emissions

Emission Factor: 0.00034 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00034 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.33 ton/yr

CO Emissions

Emission Factor: 0.00135 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00135 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 1.30 ton/yr

VOC Emissions

Emission Factor: 0.00416lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00416 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 4.01 ton/yr

Asphalt Product Silo Filing

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.00059 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00059 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.57 ton/yr

PM_{10} Emissions

Emission Factor: 0.00025 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00025 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 0.24 ton/yr

CO Emissions

Emission Factor: 0.00118 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00118 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 1.14 ton/yr

VOC Emissions

Emission Factor: 0.01219 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.01219 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb = 11.75 ton/yr

Cold Aggregate Screens and Storage Bins

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Transfers: 4 Transfers (Assumed)
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0036 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 4 transfers = 10.41 ton/yr

PM_{10} Emissions

Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0022 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 4 transfers = 6.36 ton/yr

Cold Aggregate Handling/Conveyors

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Transfers: 4 Transfers (Assumed)
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.003 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyors, Controlled, 8/04)

Calculations: 0.003 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 4 transfers = 11.56 ton/yr

PM_{10} Emissions

Emission Factor: 0.0011 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyors, Controlled, 8/04)
Calculations: 0.0011 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 4 transfers = 4.24 ton/yr

Cold Aggregate Storage Piles

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Piles: 2 Piles (Assumed)
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.00331 lb/ton (AP-42, Section 13.2.4, Equation 13.2.4.3, Predictive Emission Factor, assume PM < 30 microns, 10 mph mean wind speed, and 3% material moisture content)
Calculations: 0.00331 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 2 Piles = 6.38 ton/yr

PM_{10} Emissions

Emission Factor: 0.00157 lb/ton (AP-42, Section 13.2.4, Equation 13.2.4.3, Predictive Emission Factor, assume PM < 10 microns, 10 mph mean wind speed, and 3% material moisture content)
Calculations: 0.00157 lb/ton * 220 ton/hr * 8760 hr/yr * 0.0005 ton/lb * 2 Piles = 3.03 ton/yr

Lime Silo

Operating Parameters:
Fabric Filter Flow Capacity: 1000 dscfm (Similar Source Information (fabric-filter bin vent))
Operating Hours: 8760 hr/yr (Annual Capacity)

PM Emissions

Emission Factor: 0.02 gr/dscf (EPA Fabric Filter Emission Factor)
Calculations: 0.02 gr/dscf * 1000 dscfm * 1 lb/7000 gr * 60 min/hr = 0.17 lb/hr
0.17 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.75 ton/yr

PM_{10} Emissions

Emission Factor: 0.02 gr/dscf (EPA Fabric Filter Emission Factor)
Calculations: 0.02 gr/dscf * 1000 dscfm * 1 lb/7000 gr * 60 min/hr = 0.17 lb/hr
0.17 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.75 ton/yr

Haul Roads/Vehicle Traffic

Operating Parameters:
Vehicle miles traveled: 5 VMT/day (Estimated)
Assumption: Rated Load Capacity < 50 tons
Haul Road Use: 365 day/yr

PM Emissions:

Emission Factor: 13.90 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)
Calculations: 5.0 VMT/day * 13.90 lb/VMT = 69.50 lb/day
69.50 lb/day * 365 day/yr * 0.0005 ton/lb = 12.68 ton/yr

PM_{10} Emissions:

Emission Factor: 3.95 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)
Calculations: 5 VMT/day * 3.95 lb/VMT = 19.75 lb/day

19.75 lb/day * 365 day/yr * 0.0005 ton/lb = 3.60 ton/yr

V. Existing Air Quality

Permit #3391-02 applies while operating at any location within Montana, except within those areas having a Department-approved permitting program or those areas considered to be tribal lands. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* Addendum 3 and Permit #3391-02 apply to the LHC facility while operating at specific locations in or within 10 km of certain PM_{10} nonattainment areas during the winter months, as approved by the Department, and at any location in or within 10 km of any PM_{10} nonattainment areas during the summer months.

VII. Ambient Air Quality Impacts

Permit #3391-02 is issued for a portable drum-mix asphalt plant to be located at various locations throughout Montana. This permit contains operational conditions and limitations that will protect air quality for any given operating site and the surrounding area. Also, this facility is a portable source that will operate on an intermittent and temporary basis; therefore, any impacts to air quality will be minor and short-lived. Further, the amount of controlled emissions generated by this project will not cause concentrations of pollutants in the ambient air that exceed any set ambient standard.

VIII. Taking or Damaging Implication Analysis

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

IX. Environmental Assessment

The current permit action was conducted in accordance with ARM 17.8.764 and is considered an administrative action; therefore, an environmental assessment is not required.

ADDENDUM 3
LHC, Inc.
Permit #3391-02

An addendum to air quality Permit #3391-02 is issued to LHC, Inc., (LHC) pursuant to Section 75-2-204 and 75-2-211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.765, as amended, for the following:

I. Permitted Equipment

LHC operates an ADM drum-mix asphalt plant with a baghouse, a 4-bin cold aggregate feed system, a lime silo, an asphalt product silo, and associated equipment.

II. Seasonal and Site Restrictions

Addendum 3 applies to LHC while operating at any location in or within 10 km of certain PM_{10} nonattainment areas. Additionally, seasonal and site restrictions apply to the facility as follows:

A. During the winter season (October 1 through March 31) LHC may operate at:

- Section 25 and Section 26, Township 29 North, Range 22 West, in Flathead County. This site is within the Kalispell PM_{10} nonattainment area.
- Any other site that may be approved by the Department of Environmental Quality (Department), in writing.

B. During the summer season (April 1 through September 30): LHC may operate at any location in or within 10 km of the Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte PM_{10} nonattainment areas.

LHC shall comply with the limitations and conditions contained in Addendum 3 to Permit #3391-02 while operating in or within 10 km of any PM_{10} nonattainment areas. Addendum 3 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum 3 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: Summer Season (April 1 through September 30)

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.752).

2. LHC shall not cause or authorize to be discharged into the atmosphere from the facility any visible emissions which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

3. LHC shall not cause or authorize to be discharged into the atmosphere from the facility any fugitive emissions, including, but not limited to, truck loading or unloading and material transfer operations, which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

4. Asphalt plant production shall not exceed 1,182,500 tons during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

5. LHC 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. Water and water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitation in Section III.A.2 (ARM 17.8.749).

7. LHC 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 averaged over 6 consecutive minutes (ARM 17.8.749).

8. LHC 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 reasonable precautions and visible fugitive emission limitations in Section III.A.5 and Section III.A.7 (ARM 17.8.749).

B. Operational Limitations and Conditions: Winter Season (October 1 through March 31)

1. Asphalt plant particulate matter emissions shall be limited to 0.04 grains per dry standard cubic feet (gr/dscf) (ARM 17.8.752).

2. LHC shall not cause or authorize to be discharged into the atmosphere from the facility any visible emissions which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

3. LHC shall not cause or authorize to be discharged into the atmosphere from the facility any fugitive emissions, including, but not limited to, truck loading or unloading and material transfer operations, which exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

4. During the winter season, asphalt plant production shall not exceed 2145 tons of asphalt during any rolling 24-hour time period (ARM 17.8.749).

5. During the winter season, LHC shall install and operate partial enclosures for the control of particulate matter emissions from the 4-Bin Cold Aggregate Feed system (ARM 17.8.749).

6. LHC 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).

7. Water and water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity limitation in Section III.B.2 (ARM 17.8.749).

8. LHC 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 averaged over 6 consecutive minutes (ARM 17.8.749).

9. LHC 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 reasonable precautions and visible fugitive emission limitations in Section III.B.6 and Section III.B.8 (ARM 17.8.749).

C. Operational Reporting Requirements (Winter and Summer Seasons)

1. LHC shall provide the Department with written notification of job completion within 10 working days of job completion (ARM 17.8.749).

2. LHC shall provide written notice of relocation of the permitted equipment at least 15 days prior to the physical transfer of equipment (ARM 17.8.765).

3. During the summer season (April 1 through September 30), LHC shall document, by month, the asphalt production from the facility. By the 25th day of each month, LHC shall sum the asphalt production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section III.A.4. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

4. During the winter season (October 1 through March 31), LHC shall document, by day, the total asphalt production. LHC shall sum the total asphalt production during the previous 24 hours to verify compliance with the limitation in Section III.B.4. A written report of compliance verification and the emissions inventory shall be submitted to the Department annually. The report for the previous calendar year shall be submitted along with the annual emission inventory (ARM 17.8.749).

5. Production information for the site(s) covered by this addendum shall be submitted to the Department within 30 days of completion of the project. The information shall include (ARM 17.8.749):

   a. Tons of asphalt produced

   b. Daily hours of operation

   c. Type and amount of fuel used for the asphalt plant (hot-mix dryer)

   d. Fugitive dust information consisting of a listing of all plant vehicles, including the following for each vehicle type:

      i. Number of vehicles
      ii. Vehicle type
      iii. Vehicle weight, loaded
      iv. Vehicle weight, unloaded
      v. Number of tires on vehicle
      vi. Average trip length
      vii. Number of trips per day per vehicle
      viii. Average vehicle speed
      ix. Area of activity
      x. Vehicle fuel usage (gasoline or diesel) annual total

e. Fugitive dust control for haul roads and general plant area:

i. Hours of operation of water trucks
ii. Application schedule for chemical dust suppressant, if applicable

ADDENDUM 3 ANALYSIS
LHC Inc.
Permit #3391-02

I. Permitted Equipment

LHC, Inc., (LHC) owns and operates an ADM drum-mix asphalt plant with a baghouse, a 4-bin cold aggregate feed system, a lime silo, an asphalt product silo, and associated equipment.

II. Current Permit Action

On May 30, 2007, the Department of Environmental Quality (Department) received a request from LHC for an administrative amendment to Permit #3391-01 and Addendum 2. Specifically, LHC proposed the addition of enforceable conditions requiring the installation and operation of additional particulate control measures for the 4-bin cold aggregate feed system for wintertime operations in the Kalispell PM_{10} nonattainment area. Further, the Department updated the emission inventory for the permitted facility to reflect up-to-date published emission factors for hot-mix asphalt plants and updated Addendum 2 to reflect current Department modeling guidance for portable or temporary sources operating in or within 10 km of certain PM_{10} nonattaiment areas during the winter season. **Permit #3391-02** replaces Permit #3391-01 and **Addendum 3** replaces Addendum 2.

III. Source Description

For a typical operational set-up, stockpiled aggregate is loaded into the cold feeder. The aggregate is dispensed from the bins, and dumped onto feeder conveyors that transfer the aggregate to the drum-mix dryer. The aggregate travels through the rotating drum where asphalt oil and lime is added to the dryer. The dryer drum mixes the asphalt oil, lime, and the aggregate. The resulting hot-mix asphalt is loaded into a hot-mix asphalt storage silo where it is stored until the asphalt is dumped into trucks for transport to the project site.

IV. 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.

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 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.

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. 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.

C. 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 one year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

LHC must submit proof of compliance with the transfer and public notice requirements when they transfer to the location covered by this addendum and will only be allowed to stay in the new location for a period of less than one year. Also, the conditions and controls of this addendum will keep LHC from having a significant impact on the PM_{10} nonattainment areas covered by this permit.

V. Emission Inventory

	lb/day					
Emitting Unit	**PM**	**PM_{10}**	**NO_x**	**CO**	**VOC**	**SO_x**
Drum Mix Asphalt Plant Dryer	61.94	39.22	93.78	221.65	54.56	98.89
Hot Oil Heater	0.00	0.00	0.00	0.31	0.00	0.00
Drum Mix Plant Asphalt Load-Out	0.89	0.58	0.00	2.30	7.09	0.00
Asphalt Product Silo Filing	1.01	0.43	0.00	2.01	20.78	0.00
Cold Aggregate Screens and Storage Bins	12.28	7.50	0.00	0.00	0.00	0.00
Cold Aggregate Handling/Conveyors	20.46	7.50	0.00	0.00	0.00	0.00
Cold Aggregate Storage Piles	11.29	5.35	0.00	0.00	0.00	0.00
Lime Silo Bin Vent	1.33	1.33	0.00	0.00	0.00	0.00
Haul Roads/Vehicle Traffic	69.50	19.75	0.00	0.00	0.00	0.00
Total	**178.69**	**81.66**	**93.78**	**226.27**	**82.44**	**98.89**
Note: Winter Season Emission Inventory (October 1 through March 31)						

Emission Calculations

Drum-Mix Asphalt Plant Dryer

Operating Parameters:

Operating Hours:	7.75 hr/day (Permit Limit through Asphalt Production Limit)
Plant Elevation:	3500 ft. (General Assumption for Portable Plant)
Standard Pressure:	29.92 inches Hg
Actual Pressure:	26.42 inches Hg (approximation: subtract 1 inch for each 1000 ft of rise in elevation)
Flow-Rate:	38,000 acfm (Similar Source Information)
Standard Temperature:	20ºC 68ºF 528ºR
Assumed Stack Temp:	149ºC 300ºF 760ºR
Corrected Flow-Rate:	38,000 acfm (26.42 in. Hg / 29.92 in. Hg) (528ºR / 760ºR) = 23,312 dscfm
Process Rate:	220 ton/hr (Company Information)

PM Emissions

Emission Factor:	0.04 gr/dscf (BACT Limit)	
Calculations:	0.04 gr/dscf * 23312 dscfm * 1 lb/7000 gr * 60 min/hr =	7.99 lb/hr
	7.99 lb/hr * 7.75 hr/day =	61.94 lb/day

PM_{10} Emissions

Emission Factor: 0.023 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.023 lb/ton * 220 ton/hr * 7.75 hr/day = 39.22 lb/day

NOx Emissions

Emission Factor: 0.055 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.055 lb/ton * 220 ton/hr * 7.75 hr/day = 93.78 lb/day

CO Emissions

Emission Factor: 0.13 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.13 lb/ton * 220 ton/hr * 7.75 hr/day = 221.65 lb/day

VOC Emissions

Emission Factor: 0.032 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.032 lb/ton * 220 ton/hr * 7.75 hr/day = 54.56 lb/day

SOx Emissions

Emission Factor: 0.058 lb/ton (AP-42, Section 11.1, Table 11.1-3, Drum Mix, Fabric Filter, 3/04)
Calculations: 0.058 lb/ton * 220 ton/hr * 7.75 hr/day = 98.89 lb/day

Hot Oil Heater

Operating Parameters:
Natural Gas Consumption: 1.5 MMBtu/hr (Company Information)
0.00105 MMBtu/scf (AP-42, Appendix A)
Operating Hours: 24 hr/day (Daily Capacity)
Calculation: 1.5 MMBtu/hr / 0.00105 MMBtu/scf * 24 hr/day = 34,286 scf/yr

CO Emissions

Emission Factor: 8.90E-06 lb/scf (AP-42, Section 11.1, Table 11.1-13, Diesel Fuel, 3/04)
Calculations: 8.90E-06 lb/scf * 34,826 scf/day = 0.31 lb/day

Drum-Mix Plant Asphalt Load-Out

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)

PM Emissions

Emission Factor: 0.00052 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00052 lb/ton * 220 ton/hr * 7.75 hr/day = 0.89 lb/day

PM_{10} Emissions

Emission Factor: 0.00034 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00034 lb/ton * 220 ton/hr * 7.75 hr/day = 0.58 lb/day

CO Emissions

Emission Factor: 0.00135 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00135 lb/ton * 220 ton/hr * 7.75 hr/day = 2.30 lb/day

VOC Emissions

Emission Factor: 0.00416lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00416 lb/ton * 220 ton/hr * 7.75 hr/day = 7.09 lb/day

Asphalt Product Silo Filing

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)

PM Emissions

Emission Factor: 0.00059 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00059 lb/ton * 220 ton/hr * 7.75 hr/day = 1.01 lb/day

PM_{10} Emissions

Emission Factor: 0.00025 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00025 lb/ton * 220 ton/hr * 7.75 hr/day = 0.43 lb/day

CO Emissions

Emission Factor: 0.00118 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.00118 lb/ton * 220 ton/hr * 7.75 hr/day = 2.01 lb/day

VOC Emissions

Emission Factor: 0.01219 lb/ton (AP-42, Section 11.1, Table 11.1-14, 3/04, , Predictive Emission Factor, assume default values of -0.5 asphalt volatility and 325ºF)
Calculations: 0.01219 lb/ton * 220 ton/hr * 7.75 hr/day = 20.78 lb/day

Cold Aggregate Screens and Storage Bins

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Transfers: 4 Transfers (Assumed)
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)
Control Efficiency: 50% (Permit Limit: Partial Enclosure)

PM Emissions

Emission Factor: 0.0036 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0036 lb/ton * 220 ton/hr * 7.75 hr/day * 4 transfers * 50% Control = 12.28 lb/day

PM_{10} Emissions

Emission Factor: 0.0022 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Fines Screening, Controlled, 8/04)
Calculations: 0.0022 lb/ton * 220 ton/hr * 7.75 hr/day * 4 transfers * 50% Control = 7.50 lb/day

Cold Aggregate Handling/Conveyors

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Transfers: 4 Transfers (Assumed)
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)

PM Emissions

Emission Factor: 0.003 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyors, Controlled, 8/04)
Calculations: 0.003 lb/ton * 220 ton/hr * 7.75 hr/day * 4 transfers = 20.46 lb/day

PM_{10} Emissions

Emission Factor: 0.0011 lb/ton (AP-42, Section 11.19, Table 11.19.2-2, Conveyors, Controlled, 8/04)
Calculations: 0.0011 lb/ton * 220 ton/hr * 7.75 hr/day * 4 transfers = 7.50 lb/day

Cold Aggregate Storage Piles

Operating Parameters:
Process Rate: 220 ton/hr (Company Information)
Piles: 2 Piles (Assumed)
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)

PM Emissions

Emission Factor: 0.00331 lb/ton (AP-42, Section 13.2.4, Equation 13.2.4.3, Predictive Emission Factor, assume PM < 30 microns, 10 mph mean wind speed, and 3% material moisture content)
Calculations: 0.00331 lb/ton * 220 ton/hr * 7.75 hr/day * 2 Piles = 11.29 lb/day

PM_{10} Emissions

Emission Factor: 0.00157 lb/ton (AP-42, Section 13.2.4, Equation 13.2.4.3, Predictive Emission Factor, assume PM < 10 microns, 10 mph mean wind speed, and 3% material moisture content)
Calculations: 0.00157 lb/ton * 220 ton/hr * 7.75 hr/day * 2 Piles = 5.35 lb/day

Lime Silo

Operating Parameters:
Fabric Filter Flow Capacity: 1000 dscfm (Similar Source Information (fabric-filter bin vent))
Operating Hours: 7.75 hr/day (Permit Limit through Daily Production Limit)

PM Emissions

Emission Factor: 0.02 gr/dscf (EPA Fabric Filter Emission Factor)
Calculations: 0.02 gr/dscf * 1000 dscfm * 1 lb/7000 gr * 60 min/hr = 0.17 lb/hr
0.17 lb/hr * 7.75 hr/day = 1.33 lb/day

PM_{10} Emissions

Emission Factor: 0.02 gr/dscf (EPA Fabric Filter Emission Factor)
Calculations: 0.02 gr/dscf * 1000 dscfm * 1 lb/7000 gr * 60 min/hr = 0.17 lb/hr
0.17 lb/hr * 7.75 hr/day = 1.33 lb/day

Haul Roads/Vehicle Traffic

Operating Parameters:
Vehicle miles traveled: 5 VMT/day (Estimated)
Assumption: Rated Load Capacity < 50 tons

PM Emissions:

Emission Factor: 13.90 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)
Calculations: 5.0 VMT/day * 13.90 lb/VMT = 69.50 lb/day

PM_{10} Emissions:

Emission Factor: 3.95 lb/VMT (controlled) (AP-42 Section 13.2.2, 12/03)
Calculations: 5 VMT/day * 3.95 lb/VMT = 19.75 lb/day

VI. Existing Air Quality

On July 1, 1987, the Environmental Protection Agency (EPA) promulgated new National Ambient Air Quality Standards (NAAQS) for PM_{10}. Due to exceedances of the national standards for PM_{10}, 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 PM_{10}. As a result of this designation, the EPA required the Department and the City-County Health Departments to submit PM_{10} 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 PM_{10} emissions. Addendum 3 contains operational conditions and limitations that will protect air quality for operations in or within 10 km of any PM_{10} nonattainment area during the summertime and at specific locations in or within 10 km of certain PM_{10} nonattainment areas, as approved by the Department, during the wintertime.

VII. Air Quality Impacts

Addendum 3 to Permit #3391-02 sets more stringent conditions and limitations (more stringent than Permit #3391-02) applicable to this asphalt plant while located in or within 10 km of any PM_{10} nonattainment area during the summer months (April through September) and within the Kalispell PM_{10} nonattainment area at Section 25 and Section 26, Township 29 North, Range 22 West, in Flathead County, as well as any other Department approved area during the winter months (October through March). In the view of the Department, the conditions and limitations contained in Addendum 3 are protective of the PM_{10} nonattainment areas.

VIII. Taking or Damaging Implication Analysis

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

IX. Environmental Assessment

The current permit action was conducted in accordance with ARM 17.8.764 and is considered an administrative action; therefore, an environmental assessment is not required.

Analysis Prepared By: M. Eric Merchant
Date: June 18, 2007