Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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May 10, 2011

Mr. Alan Flory
Evergreen Wood Energy, LLC
P.O. Box 494
Bonners Ferry, ID 83805

Dear Mr. Flory:

Montana Air Quality Permit #4051-01 is deemed final as of May 10, 2011, by the Department of Environmental Quality (Department). This permit is for a Portable Wood Grinding Operation and associated equipment. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Doug Kuenzli
Environmental Science Specialist
Air Resources Management Bureau
(406) 444-4267

VW:DCK
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #4051-01

Evergreen Wood Energy, LLC
P.O. Box 494
Bonners Ferry, ID 83805

May 10, 2011

MONTANA AIR QUALITY PERMIT

Issued To: Evergreen Wood Energy, LLC
P.O. Box 494
Bonners Ferry, ID 83805

MAQP: #4051-01
Administrative Amendment (AA) Request Received: 02/15/2011
Department's Decision on AA: 04/22/2011
Permit Final: May 10, 2011
AFS: #777-4051

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

SECTION I. Permitted Facilities

A. Plant Location

Evergreen operates a portable wood grinding operation and associated diesel engines. MAQP #4051-01 applies while operating at any location in Montana, except those areas having a Montana 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 (PM_{10}) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana*.

Evergreen's original location is within Section 32, Township 31 North, Range 31 West, in Lincoln County, Montana. This site is in or within 10 km of the Libby PM_{10} nonattainment area. MAQP #4051-01 and Addendum #1 are required at locations in or within 10 km of certain PM_{10} nonattainment areas.

B. Current Permit Action

On February 15, 2011, the Department received a request to change the permit to reflect transfer of ownership of the portable wood grinding operation from Fodge Pulp, Inc. (Fodge) to Evergreen. The current permit action is an administrative amendment pursuant to ARM 17.8.764 that changes the permittee name as requested. In addition to accounting for this name change, the permit updates the rule references and permit format.

SECTION II. Conditions and Limitations

A. Emission Limitations

1. Evergreen shall not cause or authorize to be discharged into the atmosphere from any source visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304 and ARM 17.8.752).

2. Evergreen 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).

3. Evergreen 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.2 (ARM 17.8.752).

4. Water and/or water spray bars shall be available on site at all times and operated, as necessary, to maintain compliance with the opacity and reasonable precautions limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749).

5. The diesel engine powering the Peterson Pacific DDC5000 wood/waste grinder shall be limited to 5000 hours of operation during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

6. The diesel engine powering the Peterson Pacific HC2400 wood/waste-wood grinder shall be limited to 3900 hours of operation during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

7. If the permitted equipment is used in conjunction with any other equipment owned or operated by Evergreen, 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 calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).

8. Evergreen shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable diesel engine (ARM 17.8.340; 40 CFR 60, Subpart IIII; ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures manual (ARM 17.8.106).

2. The Department may require testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If the wood grinding plant is moved to another location, an Intent to Transfer form must be sent to the Department. In addition, a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The Intent to Transfer form and the proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Evergreen 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 not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Evergreen shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to 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. Evergreen shall maintain on-site records showing daily hours of operation and daily production rates for the last 12 months. The records complied in accordance with this permit shall be maintained under Evergreen control as a permanent business record for at least 5 years following the date of the measurement, must be available for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

5. Evergreen shall document, by month, the operating hours of the diesel engine powering the Peterson Pacific DDC5000 wood grinder. By the 25th day of each month, Evergreen shall total the diesel engine operating hours for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.5. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

6. Evergreen shall document, by month, the operating hours of the diesel engine powering the Peterson Pacific HC2400 wood/waste-wood grinder. By the 25th day of each month, Evergreen shall total the diesel engine operating hours for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.6. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. Evergreen 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 along with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

SECTION III. General Conditions

A. Inspection – Evergreen 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 such as continuous emissions monitoring systems (CEMS) or continuous emission rate monitoring systems (CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

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

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Evergreen of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq*. (ARM 17.8.756)

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.

G. Air Quality Operation Fees – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Evergreen may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.

J. Evergreen shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program or areas considered tribal lands.

Montana Air Quality Permit (MAQP) Analysis
Evergreen Wood Energy, LLC
MAQP #4051-01

I. Introduction/Process Description

A. Permitted Equipment

Evergreen Wood Energy, LLC (Evergreen) owns and operates a portable wood grinding operation. Equipment includes but is not limited to the following;

- Peterson Pacific DDC 5000 wood chipper/grinder [80 tons per hour (TPH)] powered by a 1996 Caterpillar 3412E diesel-fired engine with a 1000 horsepower (hp) capacity;
- Peterson Pacific HC 2400 waste-wood chipper/grinder [65 TPH] powered by a 1996 Caterpillar 3406 diesel-fired engine with a 330 hp capacity; and
- Associated material handling and storage equipment.

B. Source Description

Evergreen will use the portable wood grinding plant to chip and grind wood and wood-waste products for various purposes. For a typical operational set-up, front end loaders deposit wood product and wood waste on to the grinder's in-feed belt deck, where material is feed into the grinder. Material is conveyed from the grinder to a chip truck for product hauling.

C. Permit History

On November 21, 2006, Fodge Pulp, Inc. (Fodge) was issued **MAQP #4051-00** for the operation a portable wood grinding operation. The initial location was Section 32, Township 31 North, Range 31 West, in Lincoln County, Montana.

D. Current Permit Action

On February 15, 2011, the Department of Environmental Quality (Department) received a request to change the permit to reflect transfer of ownership of the portable wood grinding operation from Fodge to Evergreen. The current permit action is an administrative amendment that changes the permittee name as requested. **MAQP #4051-01** replaces MAQP #4051-00

E. Additional Information

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

II. Applicable Rules and Regulations

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

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

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

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

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}
11. ARM 17.8.230 Fluoride in Forage

Evergreen must maintain compliance with all 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 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter (PM). (2) Under this rule, Evergreen 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 17.8.340 Standards of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) 60, Standards of Performance for New Stationary Sources (NSPS). Based on the information submitted by Evergreen the portable wood grinding operation and associated equipment are subject to NSPS (40 CFR Part 60), as follows:

   a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:

   b. 40 CFR 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE). Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are manufactured after April 1, 2006 and are not fire pump engines, are subject to this subpart.

      The CI ICE equipment to be used under MAQP #4051-01 are not subject to this subpart because the permitted diesel-fired engines are manufactured before April 1, 2006, and are not a fire pump engines; therefore the engines are not subject to NSPS. Engines added or replaced in the future may be subject to this subpart.

7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below.

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to a NESHAP Subpart as listed below.

   b. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). An affected source is any existing, new, or reconstructed stationary reciprocating internal combustion engine (RICE) at a major or area source of Hazardous Air Pollutant emissions, excluding stationary RICE is being tested at a stationary test cell/stand. Pursuant to 40 CFR Part 63.6590(a)(2)(iii), a stationary RICE located at an area source of HAP emissions is new if construction commenced on the stationary RICE on or after June 12, 2006.

      Pursuant to 40 CFR Part 63.6590(b)(3), RICE do not have any requirements under this subpart unless they are new or reconstructed after June 12, 2006. Based on the information submitted by Evergreen, the two diesel engines to be used under MAQP #4051-01 were constructed before April 1, 2006, and are not subject to this subpart. Engines added or replaced in the future may be subject to this subpart.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. A permit fee is not required for the current permit action because the permit action is considered an administrative permit change.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department.

   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 facility to obtain an air quality permit or permit modification if they construct, modify, or use any air contaminant sources that have the Potential to Emit (PTE) more than 25 tons per year of any pollutant. Evergreen has the PTE greater than 25 tons per year of nitrogen oxides (NO_x); therefore, a permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the MAQP 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, modification, or use of a source. A permit application was not required for the current permit action because the permit change is considered an administrative permit change. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Evergreen 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 (EIS).

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of 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 1 year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

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

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

2. ARM 17.8.818 Review of Major Stationary Sources and Major 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 particulate matter with an aerodynamic diameter of 10 microns or less (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 MAQP #4051-01 for Evergreen, the following conclusions were made:

   a. The facility's PTE is not less than 100 tons/year for NOx.

   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 not subject to any current NSPS.

   e. This facility is not subject to any current NESHAP standards.

   f. This source is neither a Title IV affected source.

   g. This source is not a solid waste combustion unit.

   h. This source is not an EPA designated Title V source.

   i. As allowed by 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 source 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.

   Evergreen requested federally enforceable permit limits applicable to the diesel engines powering the Peterson Pacific DDC5000 and the Peterson Pacific HC2400 wood/wood waste grinders to remain a minor source of emissions with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program.

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 modified source. Evergreen shall install on the new or modified 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

Emission Source	Emissions Tons/Year [PTE]						
	PM	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	VOC
Petersen Pacific DDC5000 Wood Grinder	3.50	1.75					
Petersen Pacific DDC5000 Material Handling	7.01	3.50					
Petersen Pacific DDC5000 1000 hp Diesel Engine[(a)]	1.75	1.76	1.47	13.75	60.00	8.090	1.76
Petersen Pacific HC2400 Wood Grinder	2.85	1.42					
Petersen Pacific HC2400 Material Handling	5.69	2.85					
Petersen Pacific HC2400 330 hp diesel Engine[(a)]	1.42	1.42	0.22	4.30	19.95	1.32	1.62
Unpaved Roadways (Haul Roads)	8.04	2.22	0.22				
TOTAL EMISSIONS [TPY] ►	30.26	14.91	1.91	18.05	79.95	9.41	3.38

a. Emission Inventory reflects enforceable limits on hours of operation to keep allowable emissions below the Title V threshold AND 80 tpy.

CO, carbon monoxide
NO_X, oxides of nitrogen
PM, particulate matter
PM_{10}, particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$, particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_2, oxides of sulfur
TPY, tons per year
VOC, volatile organic compounds

Petersen Pacific DDC5000 Grinder

Production Rate:	80	tons/hour (Design Maximum)	700800	tons/year (Maximum)
Hours of Operation:	8760	hours/year (Maximum)		
Control Efficiency (C_e):	50	% [Water Application]		
Power Plant:	1000	hp - 1996 Caterpillar 3412E Diesel Engine		

Material Processing:

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02 lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (80 tons/hr) * (50% C_e) =	0.80	lbs/hr
	(0.80 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	3.50	TPY

PM_{10} Emissions (controlled):

Emission Factor	0.01 lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (80 tons/hr) * (50% C_e) =	0.40	lbs/hr
	(0.40 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	1.75	TPY

Material Handling:

Particulate Emissions:

Total Transfers:	2	Transfers [Load-in and Load-Out to Trucks]
Control Efficiency (C_e):	50	% [Water Application]

PM Emissions (controlled):

Emission Factor	0.02	lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (80 tons/hr) * (50% C_e) * (2 transfers) =		1.60	lbs/hr
	(1.60 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =		7.01	TPY

PM_{10} Emissions (controlled):

Emission Factor	0.01	lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (80 tons/hr) * (% C_e) * (2 transfers) =		0.80	lbs/hr
	(0.80 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =		3.50	TPY

Diesel Generator:

Output Capacity:	1000	hp
Fuel Input:	7.0	MMBtu/hr
Fuel Sulfur Content (S):	0.4	Wgt. % [AP-42 App. A, page A-5; 1/95]
Hours of Operation:	5000	hours/Year

Particulate Emissions:

PM Emissions:

Emission Factor	0.0007	lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.0007 lb/hp-hr) * (1000 hp) =		0.70	lbs/hr
	(0.70 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =		1.75	TPY

PM Emissions (Condensable):

Emission Factor	0.0077	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]	
Calculations	(0.0077 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.05	lbs/hr
	(0.05 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =		0.24	TPY

PM_{10} Emissions:

Emission Factor	0.0573	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]	
Calculations	(0.0573 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.40	lbs/hr
	(0.40 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =		1.76	TPY

$PM_{2.5}$ Emissions (Filterable):

Emission Factor	0.0479	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]	
Calculations	(0.0479 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.34	lbs/hr
	(0.34 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =		1.47	TPY

CO Emissions:

Emission Factor	0.0055	lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.0055 lb/hp-hr) * (1000 hp) =		5.50	lbs/hr
	(5.50 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =		13.75	TPY

NOx Emissions:

Emission Factor	0.024 lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.024 lb/hp-hr) * (1000 hp) =	24.00	lbs/hr
	(24.00 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =	60.00	TPY

SO_2 Emissions:

Emission Factor	0.00809 * (S) lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.00809 lb/hp-hr) * (0.4% Sulfur Content) *(1000 hp) =	3.24	lbs/hr
	(3.24 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =	8.09	TPY

VOC Emissions:

Emission Factor	0.000705 lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.000705 lb/hp-hr) * (1000 hp) =	0.71	lbs/hr
	(0.71 lbs/hr) * (5000 hrs/yr) * (0.0005 tons/lb) =	1.76	TPY

Petersen Pacific HC2400 Grinder

Production Rate:	65	tons/hour (Design Maximum)	569400	tons/year (Maximum)
Hours of Operation:	8760	hours/year (Maximum)		
Control Efficiency (C_e):	50	% [Water Application]		
Power Plant::	330	hp - 1996 Caterpillar 3406 Diesel Engine		

Material Processing:

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02 lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (65 tons/hr) * (50% C_e) =	0.65	lbs/hr
	(0.65 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	2.85	TPY

PM_{10} Emissions (controlled):

Emission Factor	0.01 lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (65 tons/hr) * (50% C_e) =	0.33	lbs/hr
	(0.33 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	1.42	TPY

Material Handling:

Total Transfers:	2	Transfers [Load-in and Load-Out to Trucks]
Control Efficiency (C_e):	50	% [Water Application]

PM Emissions (controlled):

Emission Factor	0.02 lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (65 tons/hr) * (50% C_e) * (2 Transfers) =	1.30	lbs/hr
	(1.30 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	5.69	TPY

PM_{10} Emissions (controlled):

Emission Factor	0.01 lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (65 tons/hr) * (50% C_e) * (2 Transfers) =	0.65	lbs/hr
	(0.65 lbs/hr) * (8760 hrs/yr) * (0.0005 tons/lb) =	2.85	TPY

Diesel Generator:

Output Capacity:	330	hp
Fuel Input:	2.31	MMBtu/hr
Fuel Sulfur Content (S):	0.4	Wgt. % [AP-42 App. A, page A-5; 1/95]
Hours of Operation:	3900	hours/year

Particulate Emissions:

PM Emissions:

Emission Factor	0.0022	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.0022 lb/hp-hr) * (330 hp) =			0.73	lbs/hr
	(0.73 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			1.42	TPY

PM Emissions (Condensable):

Emission Factor	0.0077	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]		
Calculations	(0.0077 lb/MMBtu-hr) * (2.31 MMBtu/hr) =			0.02	lbs/hr
	(0.02 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			0.03	TPY

PM_{10} Emissions:

Emission Factor	0.0022	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.0022 lb/hp-hr) * (330 hp) =			0.73	lbs/hr
	(0.73 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			1.42	TPY

$PM_{2.5}$ Emissions (Filterable):

Emission Factor	0.0479	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]		
Calculations	(0.0479 lb/MMBtu-hr) * (2.31 MMBtu/hr) =			0.11	lbs/hr
	(0.11 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			0.22	TPY

CO Emissions:

Emission Factor	0.00668	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.00668 lb/hp-hr) * (330 hp) =			2.20	lbs/hr
	(2.20 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			4.30	TPY

NOx Emissions:

Emission Factor	0.031	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.031 lb/hp-hr) * (330 hp) =			10.23	lbs/hr
	(10.23 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			19.95	TPY

SO_2 Emissions:

Emission Factor	0.00205	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.00205 lb/hp-hr) * (330 hp) =			0.68	lbs/hr
	(0.68 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			1.32	TPY

VOC Emissions:

Emission Factor	0.002514	lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.0025141 lb/hp-hr) * (330 hp) =			0.83	lbs/hr
	(0.83 lbs/hr) * (3900 hrs/yr) * (0.0005 tons/lb) =			1.62	TPY

Unpaved Roadways

Particulate Emissions:

Emission Factor $EF = k(s/12)^{a} * (W/3)^{b}$ [AP-42 13.2.2, 11/06]

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

k, Empirical Constant PM =	4.9	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM_{10} =	1.5	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant $PM_{2.5}$ =	0.15	[AP-42 Table 13.2.2-2, 11/06]
s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons) =	25	[Evergreen Provided Data]
a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant $PM_{10}/PM_{2.5}$ =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor	$EF = 4.9 * (7.1/12)^{0.7} * (50/3)^{0.45}$ =	8.81	lbs/VMT		
Calculations	(12.04 lbs/VMT) * (5 miles/day) =			44.05	lbs/day
	(60.18 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			8.04	TPY

PM_{10} Emissions:

Emission Factor	$EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45}$ =	2.43	lbs/VMT		
Calculations	(3.32 lbs/VMT) * (5 miles/day) =			12.14	lbs/day
	(16.59 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			2.22	TPY

$PM_{2.5}$ Emissions:

Emission Factor	$EF = 0.15 * (7.1/12)^{0.9} * (50/3)^{0.45}$ =	0.24	lbs/VMT		
Calculations	(0.33 lbs/VMT) * (5 miles/day) =			1.21	lbs/day
	(1.66 lbs/day) * (365 days/yr) * (0.0005 tons/lb) =			0.22	TPY

V. Existing Air Quality

The initial location of this portable operation is to be located in an area designated as nonattainment for PM_{10} and attainment or unclassified for all other National Ambient Air Quality Standards.

The operating conditions contained in MAQP #4051-01 and Addendum #1 will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards (NAAQS).

VI. Air Quality Impacts

MAQP #4051-01 regulates the wood grinding plant while operating at any location within Montana excluding those counties that have a Department-approved permitting program. In the view of the Department, the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minimal and short-lived. If the source locates and operates in or within 10 km of a PM_{10} nonattainment area, Evergreen will be required to operate in accordance with Addendum #1 and MAQP #4051-01, which includes more stringent limits and conditions to ensure that the proposed operation does not result in additional degradation of air quality in the affected nonattainment

area. A more detailed discussion and analysis of ambient impacts from operations locating in or within 10 km of certain PM_{10} nonattainment areas is contained in the Addendum Analysis to Addendum #1 and MAQP #4051-01.

VII. Ambient Air Quality Impacts

The Department has determined that impacts from this permitting action are expected to be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the pubic generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

IX. Environmental Assessment

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

Analysis Prepared By: Doug Kuenzli
March 22, 2011

Addendum #1
Evergreen Wood Energy, LLC
Montana Air Quality Permit (MAQP) #4051-01

An addendum to MAQP #4051-01 is issued to Evergreen Wood Energy, LLC (Evergreen), 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

Addendum #1 and MAQP #4051-01 allow for the operation of a portable wood-grinding plant to be located in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}) nonattainment areas including, but not limited to: Libby, Thompson Falls, Kalispell, Whitefish, Columbia Falls, and Butte. Additional seasonal and site restrictions apply. The portable wood-grinding plant incorporates a Peterson Pacific DDC 5000 wood chipper/grinder powered by a 1000 brake-horsepower (bhp) capacity diesel-fired engine, a Peterson Pacific HC 2400 waste-wood chipper/grinder powered by a 330 bhp capacity diesel-fired engine, and associated equipment.

II. Seasonal and Site Restrictions - Winter and Summer Seasons

MAQP # 4051-01 and Addendum #1 apply 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. Winter Season (October 1-March 31). During the winter season, the only location(s) in or within 10 km of certain PM_{10} nonattainment area(s) where Evergreen may operate are:

1. Old Louisiana Pacific Mill Site: Section 32, Township 31 North, Range 31 West, Lincoln County, MT (Libby PM_{10} nonattainment area).

2. Any other site in or within 10 km of certain PM_{10} nonattainment areas that may be approved, in writing, by the Department of Environmental Quality (Department).

B. Summer Season (April 1-September 30). Evergreen 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.

C. Evergreen shall comply with the limitations and conditions contained in Addendum #1 and MAQP #4051-01 while operating in or within 10 km of any of the previously listed PM_{10} nonattainment areas. MAQP #4051-01 and Addendum #1 shall be valid until revoked or modified. The Department reserves the authority to modify Addendum #1 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 and Emission Limitations: Winter Season (October 1 – March 31)

1. All visible emissions from the portable wood-grinding plant and associated equipment may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

2. Water and water spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section III.A.1 (ARM 17.8.752).

3. Evergreen 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).

4. Evergreen shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation in Section II.A.3 (ARM 17.8.749).

5. Total combined wood/wood-waste grinding production from the Peterson Pacific DDC5000 and the Peterson Pacific HC2400 shall not exceed 2,900 tons per day (ARM 17.8.749).

6. Operation of the diesel engine powering the Peterson Pacific DDC5000 wood-grinder shall not exceed 20 hours per day (ARM 17.8.749 and ARM 17.8.1204).

7. Operation of the diesel engine powering the Peterson Pacific HC2400 wood-grinder shall not exceed 20 hours per day (ARM 17.8.749 and ARM 17.8.1204).

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

1. All visible emissions from the portable wood-grinding plant and associated equipment may not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.749).

2. Water and water spray bars shall be available on site at all times and operated as necessary to maintain compliance with the opacity limitations in Section III.A.1 (ARM 17.8.752).

3. Evergreen 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).

4. Evergreen shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the 10% opacity limitation in Section II.A.3 (ARM 17.8.749).

5. Total combined wood/wood-waste grinding production from the Peterson Pacific DDC5000 and the Peterson Pacific HC2400 shall not exceed 3,480 tons per day (ARM 17.8.749).

C. Operational Reporting Requirements

1. If this crushing/screening plant is moved to another nonattainment location, an Intent to Transfer form must be sent to the Department and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Production information for the sites covered by this addendum must be maintained for five years and submitted to the Department upon request. The information must include (ARM 17.8.749):

   a. Daily tons wood/waste-wood grinding production from the Peterson Pacific DDC5000 and at each site (including amount of re-circulated/rerun material). Evergreen shall document, by day, the total wood waste-production. Evergreen shall sum the total crushing production for the previous day to demonstrate compliance with the limitations in Sections III.A.5 and III.B.5.

   b. Daily tons of wood-waste production from the Peterson Pacific HC2400 at each site (including amount of re-circulated/rerun material). Evergreen shall document, by day, the total screening production. Evergreen shall sum the total screening production for the previous day to demonstrate compliance with the limitations in Sections III.A.5 and III.B.5.

   c. Daily operating hours from the diesel engine powering the Peterson Pacific DDC5000 wood grinder each site. Evergreen shall document, by day, the total hours of operation. Evergreen shall sum the total the operating hours for diesel engine powering the Peterson Pacific DDC5000 wood grinder for the previous day to demonstrate compliance with the limitations in Sections III.A.6.

   d. Daily operating hours from the diesel engine powering the Peterson Pacific HC2400 wood grinder each site. Evergreen shall document, by day, the total hours of operation. Evergreen shall sum the total the operating hours for diesel engine powering the Peterson Pacific HC2400 wood grinder for the previous day to demonstrate compliance with the limitations in Sections III.A.7.

   e. Daily tons of bulk material loaded at each site (production).

   f. Daily hours of operation at each site.

   g. Fugitive dust information consisting of the daily total miles driven on unpaved roads within the operating site for all plant vehicles.

Addendum #1 Analysis
Evergreen Wood Energy, LLC
Montana Air Quality Permit (MAQP) #4051-01

I. Permitted Equipment:

Evergreen Wood Energy, LLC (Evergreen) owns and operates a portable wood-grinding plant to be operated at various locations within Montana. Equipment used at this facility includes, but is not limited to:

- Peterson Pacific DDC 5000 wood chipper/grinder [80 tons per hour (TPH)] powered by a 1996 Caterpillar 3412E diesel-fired engine with a 1000 horsepower (hp) capacity;
- Peterson Pacific HC 2400 waste-wood chipper/grinder [65 TPH] powered by a 1996 Caterpillar 3406 diesel-fired engine with a 330 hp capacity; and
- Associated material handling and storage equipment.

II. Source Description

Evergreen will use the portable wood grinding plant to chip and grind wood and wood-waste products for various purposes. For a typical operational set-up, front end loaders deposit wood product and wood waste on to the grinder's in-feed belt deck, where material is feed into the grinder. Material is conveyed from the grinder to a chip truck for product hauling.

III. Applicable Rules and Regulations

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

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

A. ARM 17.8.749 Conditions for Issuance of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

B. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

C. ARM 17.8.765 Transfer of Permit. An air quality permit may be transferred from one location to another if:

1. Written notice of intent to transfer location and proof of public notice are sent to the Department;

2. The source will operate in the new location for a period of less than 1 year; and

3. The source will not have any significant impact on any nonattainment area or any Class I area.

Evergreen shall submit proof of compliance with the transfer and public notice requirements when Evergreen transfers to any of the locations covered by this Addendum and will only be allowed to stay in the new location for a period of less than 1 year. The conditions and limitations contained in Addendum #1 and MAQP #4051-01 will prevent Evergreen from having a significant impact on certain particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) nonattainment areas.

IV. Emission Inventory

Winter Season October 1 – March 31

	Emissions Lbs/Day						
Emission Source[a]	PM	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	VOC
Petersen Pacific DDC5000 Wood Grinder	16.00	8.00					
Petersen Pacific DDC5000 Material Handling	32.00	16.00					
Petersen Pacific DDC5000 1000 hp Diesel Engine	14.00	8.02	6.71	110.00	480.00	64.72	14.10
Petersen Pacific HC2400 Wood Grinder	13.00	6.50					
Petersen Pacific HC2400 Material Handling	26.00	13.00					
Petersen Pacific HC2400 330 hp diesel Engine	14.52	14.52	2.21	44.09	204.60	13.53	16.59
Unpaved Roadways (Haul Roads)	44.05	12.14	1.21				
TOTAL EMISSIONS [lbs/day] ►	159.57	78.18	10.13	154.09	684.60	78.25	30.69

Summer Season April 1 – September 30

	Emissions Lbs/Day						
Emission Source	PM	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	VOC
Petersen Pacific DDC5000 Wood Grinder	19.20	9.60					
Petersen Pacific DDC5000 Material Handling	38.40	19.20					
Petersen Pacific DDC5000 1000 hp Diesel Engine	16.80	9.63	8.05	132.00	576.00	77.66	16.92
Petersen Pacific HC2400 Wood Grinder	15.60	7.80					
Petersen Pacific HC2400 Material Handling	31.20	15.60					
Petersen Pacific HC2400 330 hp diesel Engine	17.42	17.42	2.66	52.91	245.52	16.24	19.91
Unpaved Roadways (Haul Roads)	44.05	12.14	1.21				
TOTAL EMISSIONS [lbs/day] ►	182.68	91.39	11.92	184.91	821.52	93.90	36.83

a. Emission Inventory reflects an enforceable limits on hours of operation to maintain a PM_{10} emission rate of less than 82 pounds per day (lb/day). Indentified emission sources shall not operate more than twenty hours per day.

CO, carbon monoxide
NO_X, oxides of nitrogen
PM, particulate matter
PM_{10}, particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$, particulate matter with an aerodynamic diameter of 2.5 microns or less
SO_2, oxides of sulfur
TPY, tons per year
VOC, volatile organic compounds

Petersen Pacific DDC5000 Grinder

Production Rate:	80	tons/hour (Design Maximum)	1600	tons/day
Hours of Operation:	20	hours/day (Maximum Allowable)		
Control Efficiency (C_e):	50	% [Water Application]		
Power Plant::	1000	hp - 1996 Caterpillar 3412E Diesel Engine		

Material Processing:

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02	lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (80 tons/hr) * (50% C_e) =		0.80	lbs/hr
	(0.80 lbs/hr) * (20 hrs/day) =		16.00	lbs/day

PM_{10} Emissions (controlled):

Emission Factor	0.01	lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (80 tons/hr) * (% C_e) =		0.40	lbs/hr
	(0.40 lbs/hr) * (20 hrs/day) =		8.00	lbs/day

Material Handling:

Total Transfers:	2	Transfers [Load-in and Load-Out to Trucks]
Control Efficiency (C_e):	50	% [Water Application]

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02	lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (80 tons/hr) * (50% C_e) * (2 Transfers) =		1.60	lbs/hr
	(1.60 lbs/hr) * (20 hrs/day) =		32.00	lbs/day

PM_{10} Emissions (controlled):

Emission Factor	0.01	lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (80 tons/hr) * (50% C_e) * (2 Transfers) =		0.80	lbs/hr
	(0.80 lbs/hr) * (20 hrs/day) =		16.00	lbs/day

Diesel Generator:

Output Capacity:	1000	hp
Fuel Input:	7.0	MMBtu/hr
Fuel Sulfur Content (S):	0.4	Wgt. % [AP-42 App. A, page A-5; 1/95]
Hours of Operation:	20	hours/day

Particulate Emissions:

Emission Factor	0.0007	lb/hp-hr	[AP-42 3.4-1, 10/96]	
Calculations	(0.0007 lb/hp-hr) * (1000 hp) =		0.70	lbs/hr
	(0.70 lbs/hr) * (20 hrs/day) =		14.00	lbs/day

PM Emissions (Condensable):

Emission Factor	0.0077 lb/MMBtu-hr	[AP-42 3.4-2, 10/96]		
Calculations	(0.0077 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.05	lbs/hr
	(0.05 lbs/hr) * (20 hrs/day) =		1.08	lbs/day

PM_{10} Emissions:

Emission Factor	0.0573 lb/MMBtu-hr	[AP-42 3.4-2, 10/96]		
Calculations	(0.0573 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.40	lbs/hr
	(0.40 lbs/hr) * (20 hrs/day) =		8.02	lbs/day

$PM_{2.5}$ Emissions (Filterable):

Emission Factor	0.0479 lb/MMBtu-hr	[AP-42 3.4-2, 10/96]		
Calculations	(0.0479 lb/MMBtu-hr) * (7.0 MMBtu/hr) =		0.34	lbs/hr
	(0.34 lbs/hr) * (20 hrs/day) =		6.71	lbs/day

CO Emissions:

Emission Factor	0.0055 lb/hp-hr	[AP-42 3.4-1, 10/96]		
Calculations	(0.0055 lb/hp-hr) * (1000 hp) =		5.50	lbs/hr
	(5.50 lbs/hr) * (20 hrs/day) =		110.00	lbs/day

NOx Emissions:

Emission Factor	0.024 lb/hp-hr	[AP-42 3.4-1, 10/96]		
Calculations	(0.024 lb/hp-hr) * (1000 hp) =		24.00	lbs/hr
	(24.00 lbs/hr) * (20 hrs/day) =		480.00	lbs/day

SO_2 Emissions:

Emission Factor	0.00809 * (S) lb/hp-hr	[AP-42 3.4-1, 10/96]		
Calculations	(0.00809 lb/hp-hr) * (0.4% Sulfur Content) * (1000 hp) =		3.24	lbs/hr
	(3.24 lbs/hr) * (20 hrs/day) =		64.72	lbs/day

VOC Emissions:

Emission Factor	0.000705 lb/hp-hr	[AP-42 3.4-1, 10/96]		
Calculations	(0.000705 lb/hp-hr) * (1000 hp) =		0.71	lbs/hr
	(0.71 lbs/hr) * (20 hrs/day) =		14.10	lbs/day

Petersen Pacific HC2400 Grinder

Production Rate:	65	tons/hour (Design Maximum)	1300	tons/day
Hours of Operation:	20	hours/day (Maximum Allowable)		
Control Efficiency (C_e):	50	% [Water Application]		
Power Plant::	330	hp - 1996 Caterpillar 3406 Diesel Engine		

Material Processing:

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02 lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]		
Calculations	(0.02 lbs/ton) * (65 tons/hr) * (50% C_e) =		0.65	lbs/hr
	(0.65 lbs/hr) * (20 hrs/day) =		13.00	lbs/day

PM_{10} Emissions (controlled):

Emission Factor	0.01	lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (65 tons/hr) * (50% C_e) =		0.33	lbs/hr
	(0.33 lbs/hr) * (hrs/day) =		6.50	lbs/day

Material Handling:

Total Transfers:	2	Transfers [Load-in and Load-Out to Trucks]
Control Efficiency (C_e):	50	% [Water Application]

Particulate Emissions:

PM Emissions (controlled):

Emission Factor	0.02	lbs/ton processed	[Department Emission Factor - Similar Source Wood Debarking]	
Calculations	(0.02 lbs/ton) * (65 tons/hr) * (50% C_e) * (2 Transfers) =		1.30	lbs/hr
	(1.30 lbs/hr) * (hrs/day) =		26.00	lbs/day

PM_{10} Emissions (controlled):

Emission Factor	0.01	lbs/ton processed	[Assumes 50% of PM is PM_{10}]	
Calculations	(0.01 lbs/ton) * (65 tons/hr) * (50% C_e) * (2 Transfers) =		0.65	lbs/hr
	(0.65 lbs/hr) * (hrs/day) =		13.00	lbs/day

Diesel Generator:

Output Capacity:	330	hp
Fuel Input:	2.31	MMBtu/hr
Fuel Sulfur Content (S):	0.4	Wgt. % [AP-42 App. A, page A-5; 1/95]
Hours of Operation:	20	hours/day

Particulate Emissions:

PM Emissions:

Emission Factor	0.0022	lb/hp-hr	[AP-42 3.3-1, 10/96]	
Calculations	(0.0022 lb/hp-hr) * (330 hp) =		0.73	lbs/hr
	(0.73 lbs/hr) * (20 hrs/day) =		14.52	lbs/day

PM Emissions (Condensable):

Emission Factor	0.0077	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]	
Calculations	(0.0077 lb/MMBtu-hr) * (2.31 MMBtu/hr) =		0.02	lbs/hr
	(0.02 lbs/hr) * (20 hrs/day) =		0.36	lbs/day

PM_{10} Emissions:

Emission Factor	0.0022	lb/hp-hr	[AP-42 3.3-1, 10/96]	
Calculations	(0.0022 lb/hp-hr) * (330 hp) =		0.73	lbs/hr
	(0.73 lbs/hr) * (20 hrs/day) =		14.52	lbs/day

$PM_{2.5}$ Emissions (Filterable):

Emission Factor	0.0479	lb/MMBtu-hr	[AP-42 3.4-2, 10/96]	
Calculations	(0.0479 lb/MMBtu-hr) * (2.31 MMBtu/hr) =		0.11	lbs/hr
	(0.11 lbs/hr) * (20 hrs/day) =		2.21	lbs/day

CO Emissions:

Emission Factor	0.00668 lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.00668 lb/hp-hr) * (330 hp) =		2.20	lbs/hr
	(2.20 lbs/hr) * (20 hrs/day) =		44.09	lbs/day

NOx Emissions:

Emission Factor	0.031 lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.031 lb/hp-hr) * (330 hp) =		10.23	lbs/hr
	(10.23 lbs/hr) * (20 hrs/day) =		204.60	lbs/day

SO_2 Emissions:

Emission Factor	0.00205 lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.00205 lb/hp-hr) * (330 hp) =		0.68	lbs/hr
	(0.68 lbs/hr) * (20 hrs/day) =		13.53	lbs/day

VOC Emissions:

Emission Factor	0.002514 lb/hp-hr	[AP-42 3.3-1, 10/96]		
Calculations	(0.0025141 lb/hp-hr) * (330 hp) =		0.83	lbs/hr
	(0.83 lbs/hr) * (20 hrs/day) =		16.59	lbs/day

Unpaved Roadways

Particulate Emissions:

Emission Factor $EF = k(s/12)^{a} * (W/3)^{b}$ [AP-42 13.2.2, 11/06]

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

k, Empirical Constant PM =	4.9	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant PM_{10} =	1.5	[AP-42 Table 13.2.2-2, 11/06]
k, Empirical Constant $PM_{2.5}$ =	0.15	[AP-42 Table 13.2.2-2, 11/06]
s, Surface Material Silt Content (%) =	7.1	[AP-42 Table 13.2.2-1, 11/06]
W, Mean Vehicle Weight (tons) =	25	[Evergreen Provided Data]
a, Empirical Constant PM =	0.7	[AP-42 Table 13.2.2-2, 11/06]
a, Empirical Constant $PM_{10}/PM_{2.5}$ =	0.9	[AP-42 Table 13.2.2-2, 11/06]
b, Empirical Constant PM - $PM_{2.5}$ =	0.45	[AP-42 Table 13.2.2-2, 11/06]

PM Emissions:

Emission Factor	$EF = 4.9 * (7.1/12)^{0.7} * (50/3)^{0.45}$ =	8.81	lbs/VMT	
Calculations	(12.04 lbs/VMT) * (5 miles/day) =		44.05	lbs/day

PM_{10} Emissions:

Emission Factor	$EF = 1.5 * (7.1/12)^{0.9} * (50/3)^{0.45}$ =	2.43	lbs/VMT	
Calculations	(3.32 lbs/VMT) * (5 miles/day) =		12.14	lbs/day

$PM_{2.5}$ Emissions:

Emission Factor	$EF = 0.15 * (7.1/12)^{0.9} * (50/3)^{0.45}$ =	0.24	lbs/VMT	
Calculations	(0.33 lbs/VMT) * (5 miles/day) =		1.21	lbs/day

V. 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, 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.

MAQP # 4051-01 and Addendum #1 are for a portable wood/wood-waste grinding plant to be located in or within 10 kilometers (km) of certain PM_{10} nonattainment areas. The more stringent operating conditions contained in Addendum #1will minimize any potential impact on the nonattainment areas and will protect the national ambient air quality standards. Also, this facility is a portable source that would be expected to operate on an intermittent and temporary basis and any effects on air quality would be expected to be minor and short-lived.

VI. Air Quality Impacts

MAQP #4051-01 and Addendum #1 will cover the operations of this portable wood grinding process while operating at any location within Montana, excluding those counties that have a Department approved permitting program and those areas that are tribal lands.

Addendum #1 will cover the operations of this portable crushing/screening plant, while operating in or within 10 km of the Libby PM_{10} nonattainment area (specific site during the winter months (October 1 through March 31). Additionally, the facility will also be allowed to operate in or within 10 km of PM_{10} nonattainment areas during the summer months (April 1 through September 30).

VII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted the following private property taking and damaging assessment (see Section VIII of the Permit Analysis for MAQP #4051-01) and determined there are no taking or damaging implications.

VIII. Environmental Assessment

The current permit action is an administrative amendment and does not constitute a state action; therefore, an environmental assessment is not required for the proposed project.

Addendum Analysis Prepared by: D. Kuenzli
Date: March 22, 2011