



Montana Department of  
**ENVIRONMENTAL QUALITY**

Brian Schweitzer, Governor

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May 5, 2011

Ms. Lynn Reed  
Bear Paw Energy, LLC  
PO Box 871  
Tulsa, OK 74102-0871

Dear Ms. Reed:

Montana Air Quality Permit #4631-00 is deemed final as of May 5, 2011 by the Department of Environmental Quality (Department). This permit is for Bear Paw Energy's Natural Gas Liquids Storage and Transfer Facility, known as the Riverview Terminal. 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

Shawn Juers  
Environmental Engineer  
Air Resources Management Bureau  
(406) 444-2049

VW:SJ  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #4631-00

Bear Paw Energy, LLC  
PO Box 871  
Tulsa, OK 74102-0871

May 5, 2011



## MONTANA AIR QUALITY PERMIT

Issued To: Bear Paw Energy, LLC  
PO Box 871  
Tulsa, OK 74102-0871

MAQP: # 4631-00  
Application Complete: 3/16/2011  
Preliminary Determination Issued: 3/17/2011  
Department's Decision Issued: 4/19/2011  
Permit Final: 5/5/2011  
AFS #: 083-0815

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Bear Paw Energy, LLC (Bear Paw Energy), 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. Permitted Equipment

Bear Paw Energy proposes to construct and operate an expansion of the Riverview Terminal. The facility has been operating since 1982 storing and loading natural gas liquids transported from surrounding gas plants via pipeline and truck. Relatively pure propane or butane (Product) are piped into horizontal pressurized tanks where they are stored for loading. Bear Paw Energy is proposing an expansion that would increase the facility's potential volatile organic compound (VOC) emissions to more than the permitting threshold of 25 tons per year; therefore, an MAQP is required. The facility consists of, but is not limited to, the following equipment:

- Six (6) 90,000 gallon (gal) pressurized mix of primarily propane, butane, and natural gasoline (Y-Grade) storage tanks
- Four (4) 30,000 gal pressurized propane or butane (Product) tanks
- Two (2) 60,000 gal pressurized Product tanks
- One (1) 30,000 gal methanol tank
- Isobutane loading from tank trucks directly to railcar tanks
- Ten (10) loading spots for loading of Product from storage tanks to cargo tanks
- Fifteen (15) loading spots for loading of Y-grade from storage tanks to railcar tanks
- Two (2) decommissioned 400 barrel (bbl) methanol tanks
- Associated equipment

#### B. Plant Location

This facility is located in Section 17 and Section 18, Township 22 North, Range 59 East in Richland County. The physical address of the facility is 34958 County Road 122, Sidney, MT 59270.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. Bear Paw Energy shall limit the loading of Product into railcar tanks to 153,300,000 gallons per rolling 12-month period (ARM 17.8.749).
2. Bear Paw Energy shall limit the loading of Y-grade into railcar tanks to 689,860,000 gallons per rolling 12-month period (ARM 17.8.749).

3. Bear Paw Energy shall limit the transfer of isobutane from tank trucks into railcar tanks to 16,425,000 gallons per rolling 12-month period (ARM 17.8.749).
4. Bear Paw Energy shall maintain and operate a closed system during all loading, transfer, and storage operations. Loading lines shall be equipped and maintained with vapor tight valves. Each transfer line shall be equipped and operated so as to utilize a pump to pull vapors from cargo tanks back into the storage tank system (ARM 17.8.752).
5. All loading of Product, Y-Grade, and Isobutane into cargo tanks shall be accomplished utilizing submerged fill methods. Cargo tanks loaded shall be specifically designed for the transportation of natural gas liquids/liquefied petroleum gases (ARM 17.8.752).
6. Bear Paw Energy shall remove, or make inoperable, the two 400 bbl methanol tanks (ARM 17.8.749).
7. Bear Paw Energy shall limit the number of fill cycles of the methanol tank during any rolling 12-month period to 10 fill cycles or less (ARM 17.8.749).
8. Bear Paw Energy shall maintain all equipment and operations, including loading pipe connections and loading operations, in dimensions, design parameters, and loading methods as presented in MAQP application #4631-00 (ARM 17.8.749 and ARM 17.8.752).
9. Bear Paw Energy 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).

B. Inspection and Maintenance Requirements

1. Once within every calendar month, all inspectable tanks, valves, flanges, connectors, compressor seals, relief valves, pump seals, loading lines and loading valves, and open-ended lines shall be inspected for wear and/or excessive leaks. For purposes of this requirement, leak detection methods incorporating sight, sound, or smell are acceptable (ARM 17.8.105 and ARM 17.8.752).
2. Bear Paw Energy shall (ARM 17.8.105 and ARM 17.8.752):
  - a. Take reasonable actions to mitigate any leaks found during the inspection as soon as possible.
  - b. Make a first attempt at repair of the cause of any leak or any defective parts found as soon as possible, but no later than 5 calendar days after the leak or defective part is detected, except as provided in Section II.B.3; and
  - c. Completely repair any source of leaks or defective parts found as soon as possible, but no later than 15 calendar days after the leak or defective part is detected, except as provided in Section II.B.3.
3. Delay of repair of equipment would be allowed if repair as required by Section II.B.2 is deemed infeasible for technical or safety related reasons. Bear Paw Energy shall

limit, to the extent possible, emissions from any such equipment, and such equipment shall be repaired as soon as reasonably possible (ARM 17.8.752).

#### C. Recordkeeping Requirements

1. Bear Paw Energy shall document the monthly inspections, indicating the date and time of the inspection, the results, and the method(s), date, and completion time for any mitigation efforts and repairs made (ARM 17.8.749).
2. For any repair delayed under the exception of II.B.3 above, the duration of any leak, a general description of the repair required, and the reasons justifying the delay, shall be recorded and maintained with the records required in Section II.C.1 (ARM 17.8.749).
3. All records compiled in accordance with this permit must be maintained by Bear Paw Energy as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

#### D. 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 of Environmental Quality (Department) may require testing (ARM 17.8.105).

#### E. Reporting Requirements

1. Bear Paw Energy shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the 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 to calculate operating fees, based on estimated actual emissions from the facility, and/or to verify compliance with permit limitations. Bear Paw Energy shall include a brief summary of the log required by Section II.C. if any inspections for the reporting period note leaks (ARM 17.8.505).

2. Bear Paw Energy 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(1)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by Bear Paw Energy as a permanent business record for at least 5 years following the date of the

4. Bear Paw Energy shall document, by month, the gallons of Product loaded to cargo tanks. By the 25<sup>th</sup> day of each month, Bear Paw Energy shall total the gallons of Product loading for the previous month, and calculate and record the rolling 12-month sum. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.1. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. Bear Paw Energy shall document, by month, the gallons of Y-grade loaded to cargo tanks. By the 25<sup>th</sup> day of each month, Bear Paw Energy shall total the gallons of Y-grade loading for the previous month, and calculate and record the rolling 12-month sum. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.2. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. Bear Paw Energy shall document, by month, the gallons of isobutane loaded between cargo tanks. By the 25<sup>th</sup> day of each month, Bear Paw Energy shall total the gallons of isobutane loading for the previous month, and calculate and record the rolling 12-month sum. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.3. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
7. Bear Paw Energy shall document, by month, the number of fill cycles for the methanol tank. By the 25<sup>th</sup> day of each month, Bear Paw Energy shall total the number of fill cycles for the previous month, and calculate and record the rolling 12-month sum. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.7. The information for each of the previous months shall be submitted along with the annual emissions inventory (ARM 17.8.749).

F. Notification

1. Bear Paw Energy shall notify the Department, in writing, of the commencement of installation of equipment described in MAQP Application #4631-00. Notification shall be postmarked within 30 days of the commencement of installation (ARM 17.8.749).
2. Bear Paw Energy shall notify the Department, in writing, of the commencement of operations of newly installed equipment described in MAQP Application #4631-00. Notification shall be postmarked within 15 days of commencement of operations (ARM 17.8.749).
3. Bear Paw Energy shall notify the Department, in writing, of the decommissioning method and decommissioned date of the two 400 bbl methanol tanks. Notification shall be postmarked within 30 days of decommissioning, or 30 days from final issuance of MAQP #4631-00, whichever is later (ARM 17.8.749).

### SECTION III: General Conditions

- A. Inspection – Bear Paw Energy shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (continuous emissions monitoring system (CEMS), continuous emissions rate monitoring system (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Bear Paw Energy fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bear Paw Energy 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 action 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 therefor, 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 MAQP shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, failure to pay the annual operation fee by Bear Paw Energy 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).

Montana Air Quality Permit (MAQP) Analysis  
Bear Paw Energy, LLC – Riverview Facility  
MAQP #4631-00

I. Introduction/Process Description

Bear Paw Energy, LLC (Bear Paw Energy) owns and operates a Natural Gas Liquids Storage and Transfer facility. The facility is located in the East half of the Northwest quarter of Section 17, Township 22 North, Range 59 East in Richland County, Montana, and is known as the Riverview Terminal.

A. Permitted Equipment

The facility consists of, but is not limited to, the following equipment:

- Six (6) 90,000 gallon (gal) pressurized mix of primarily propane, butane, and natural gasoline (Y-Grade) storage tanks
- Four (4) 30,000 gal pressurized propane or butane (Product) tanks
- Two (2) 60,000 gal pressurized Product tanks
- One (1) 30,000 gal methanol tank
- Isobutane loading from tank trucks directly to railcar tanks
- Ten (10) loading spots for loading of Product from storage tanks to cargo tanks
- Fifteen (15) loading spots for loading of Y-grade from storage tanks to railcar tanks
- Two (2) decommissioned 400 barrel (bbl) methanol tanks
- Associated equipment

B. Source Description

The facility stores, transfers, and loads natural gas liquids transported from surrounding gas plants via pipeline and truck. Spec grade Products are piped into horizontal pressure tanks where they are stored for loading into cargo tanks. Isobutane is transferred on-site from tank trucks directly to railcars. Y-grade product, consisting primarily of unseparated propane, butane, and natural gasoline, is also received and stored on-site for loading to cargo tanks. Methanol is stored on-site for freeze protection.

All transfer, storage, and loading operations are maintained under pressure. Transfers and loading are maintained as a pressurized, submerged fill, closed vapor collection system. The pressurized tank loading lines have a vapor tight valve at the ends so any vapors are contained within a closed system. Vapor displacement resulting from load out operations is located at the end of each transfer line and a pump is used to pull vapors in the system back into the Product tank(s). Submerged fill loading minimizes the creation of vapors during the loading process.

Truck loading of isobutane to railcars is accomplished with a similar system, utilizing submerged fill and a closed vapor collection system. A vapor return line is used to return any vapors in the connecting lines back to the truck vessel. Only vapors contained in the two hoses between the connections would escape to atmosphere.

Fugitive emissions from leaks of components in both liquid and gas service are minimized through inspection, leak detection, and proper operations and maintenance, to minimize emissions and fire and/or explosion hazards.

## 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 of Environmental Quality (Department). Upon request, the Department will provide references for 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).

Bear Paw Energy 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 the following:

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 Particulate Matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>)

Bear Paw Energy 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, Bear Paw Energy 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, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this rule.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank 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 and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. This facility is not a NESHAP-affected source because it does not meet the definition of any NESHAPs Subpart defined in 40 CFR Part 63.

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 MAQP application fee concurrent with the submittal of an MAQP application. A permit application is incomplete until the proper application fee is paid to the Department. Bear Paw Energy submitted the appropriate permit application fee for the current permit action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air

contaminants holding an MAQP (excluding an open burning permit) issued by the Department. The 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 MAQP 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 prorate the required fee amount.

- E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
  2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an MAQP or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. Bear Paw Energy has a PTE greater than 25 tons per year of Volatile Organic Compounds (VOC); therefore, an MAQP is required.
  3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the MAQP 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. Bear Paw Energy submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Bear Paw Energy submitted an affidavit of publication of public notice for the February 9, 2011 issue of the *Sidney Herald*, a newspaper of general circulation in the Town of Sidney in Richland County, as proof of compliance with the public notice requirements.
  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 MAQPs 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 Bear Paw Energy 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 MAQP 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 MAQP 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 MAQP 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. This rule states that an MAQP may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
- F. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
  2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 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 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<sub>10</sub> in a serious PM<sub>10</sub> nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (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 #4631-00 for Bear Paw Energy, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> 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 not 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.

Based on these facts, the Department determined that Bear Paw Energy will be a minor source of emissions as defined under Title V.

### III. BACT Determination

A BACT determination is required for each new or modified source. Bear Paw Energy 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.

#### Loading Losses

Loading losses are associated with:

1. Vapors formed in the empty tank by evaporation of residual product from previous loads.
2. Vapors transferred to the tank in vapor balance systems as product is being unloaded.
3. Vapors generated in the tanks as the new product is being loaded.

In the splash loading method, the fill pipe dispensing the cargo is lowered only part way into the cargo tank. Significant turbulence and vapor/liquid contact occur during the splash loading

operation, resulting in high levels of vapor generation and loss. If the turbulence is great enough, liquid droplets will be entrained in the vented vapors.

A second method of loading is submerged loading. Two types are the submerged fill pipe method and the bottom loading method. In the submerged fill pipe method, the fill pipe extends almost to the bottom of the cargo tank. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading by both methods, the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

Emissions from loading losses can be further reduced by use of vapor recovery equipment. A vapor recovery unit captures the vapors displaced during loading operations and recovers them for return to the product storage or for capture and/or destruction. Capturing or destructing the vapors eliminates the opportunity to recover product.

Bear Paw Energy proposed submerged filling, with vapor recovery via a closed system with a vapor return line and pump to return the vapors to the storage system.

The Department determined BACT for loading operations to be submerged filling with vapor recovery system as described by the application as proposed by Bear Paw Energy.

#### Storage/Component Losses

Losses in the storage system are associated with leaks from valves, flanges, connectors, open ended lines, seals, and relief valves. No working or breathing losses are assumed for a pressurized and closed natural gas liquids system. The Department is not aware of control technologies for fugitive emissions from leaking components.

The Department determined that proper operations and maintenance of the components, with regularly scheduled inspections and prompt correction of deviations found, to be BACT for these sources of emissions.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

#### IV. Emission Inventory

The Department compared various methods for calculating the potential emissions from pressurized, closed vapor recovery natural gas liquids storage and loading operations. No appropriate correlations are available to estimate vapor losses from pressure tanks, as confirmed by AP-42 documentation, 7.1-3 (11/2006); therefore, the Department calculated fugitive emission leaks from equipment components as appropriate. The Department also considered AP-42 Section 5.2 for losses associated with loading of the natural gas liquids into cargo tanks. However, limited information is available as to the applicability of this method to this scenario. At Bear Paw Energy's request, loading loss calculations were made assuming vapor losses associated with the volume of loading lines and the number of railcars loaded. This calculation method was determined more conservative (higher calculated emissions) than the AP-42 Section 5.2 approach. For more details on the design of the system, see Section I.B. of the Permit Analysis.

**Bear Paw Energy - Riverview Terminal  
MAQP #4631-00  
Potential To Emit in Tons Per Year\*\***

<u>Source</u>	VOC
Equipment Component Emissions:	42.22
Product Loading Emissions:	7.27
Y-Grade Loading Emissions:	27.95
Isobutane Transfers:	2.25
Methanol Tank Propane Blanket Losses:	1.85
<b>TOTAL:</b>	<b>81.53</b>

\*\* Inventory reflects enforceable limits on throughput to keep allowable emissions below the Title V threshold

ft = foot  
gal = gallons  
h = height  
hr = hour  
in = inches  
kg = kilogram  
lb = pound  
NGL = natural gas liquids

SG = specific gravity  
TPY = tons per year  
V = volume  
Pi = 3.14  
R = radius  
yr = year  
wt% = weight percent

**Fugitive Component Emissions**

Light Liquid Service*						
Component Description	Number of components	Emissions Factor (kg/hr/source)	Emissions Factor (lb/hr/source)	VOC wt%	lb/hr	ton/yr
Valves	580	0.0025	0.0055	100%	3.19	13.97
Flanges	340	0.00011	0.000242	100%	0.08	0.36
Connectors	308	0.00021	0.000462	100%	0.14	0.62
Open Ended Lines	116	0.0014	0.00308	100%	0.36	1.56
Compressor Seals	0	0.0075	0.0165	100%	0.00	0.00
Relief Valves	80	0.0075	0.0165	100%	1.32	5.78
Pump Seals	40	0.013	0.0286	100%	1.14	5.01
<b>TOTAL:</b>						<b>27.31</b>

Gas Service*						
Component Description	Number of components	Emissions Factor (kg/hr/source)	Emissions Factor (lb/hr/source)	VOC wt%	lb/hr	ton/yr
Valves	156	0.0045	0.0099	100%	1.54	6.76
Flanges	340	0.00039	0.000858	100%	0.29	1.28
Connectors	264	0.0002	0.00044	100%	0.12	0.51
Open Ended Lines	92	0.002	0.0044	100%	0.40	1.77
Compressor Seals	0	0.0088	0.01936	100%	0.00	0.00
Relief Valves	54	0.0088	0.01936	100%	1.05	4.58
TOTAL:						<b>14.90</b>

\*\*Emissions factor from *Protocol for Equipment Leak Emissions Estimates*, EPA Document 453/R-95-017, 11/1995

Total Light liquid + Gas **42.22 ton/yr**

**Product Loading Emissions Calculations**

$$\text{Loss} = \text{Density} * \text{Volume} * \# \text{ of disconnections}$$

Pipe Connection Dimensions (each pipe)

Diameter (in)	2	
Length (in)	20	
Volume (in <sup>3</sup> )	62.8	$V = \pi * r^2 * h$
Volume (ft <sup>3</sup> )	0.036	

NGL Component	SG	Density (lb/ft <sup>3</sup> )
Butane	0.585	36.52
Propane	0.501	31.28
Isobutane	0.563	35.15

Max Allowable Loading:	420,000	gal/day
Max Allowable Loading:	56,146	ft <sup>3</sup> /day
Volume of Tanker Car:	28,000	gallons
Number of Tanker Cars Loaded per day:	15	= 420,000/28,000

Loss =	39.82	lb/day	= 36.52 lb/ft <sup>3</sup> * 0.0363 ft <sup>3</sup> * 2 pipes
	14533.18	lb/yr	
	<b>7.27</b>	<b>ton/yr</b>	

### Y-Grade Loading Emissions Calculations

Max Allowable Loading:	1,890,000	gal/day	
Max Allowable Loading:	56,146	ft <sup>3</sup> /day	
Volume of Tanker Car:	28,000	gallons	
Number of Tanker Cars Loaded per day:	67.5	1890000gal/day/28000gallons	
Y-Grade Density:	31.22	lb/ft <sup>3</sup>	(See application)
Loss =	153.17	lb/day	
	55908.19	lb/yr	
	<b>27.95</b>	<b>ton/yr</b>	

### Isobutane Transfers

Max Allowable Loading:	45,000	gal/day	
Max Allowable Loading:	56,146	ft <sup>3</sup> /day	
Volume of Tanker Car:	28,000	gallons	
Number of Tanker Cars Loaded per day:	1.61	45000gal/day/28000gallons	
Isobutane Density:	35.15	lb/ft <sup>3</sup>	(See application)
Loss =	12.32	lb/day	(2 pipes, 3 disconnects per truck)
	4496.14	lb/yr	
	<b>2.25</b>	<b>ton/yr</b>	

### **Methanol Tank Propane Blanket Losses**

Losses per fill cycle: 369.06 lb/cycle (see application)

Number of fill cycles per year: 10 (permit limit)

Calculations:

$$369.06 \text{ lb/cycle} * 10 \text{ cycle} * 0.0005 \text{ lb/ton} = 1.85 \text{ ton/yr}$$

### V. Existing Air Quality

The location of the proposed facility expansion is currently designated as attainment/unclassifiable for all criteria pollutants.

### VI. Ambient Air Impact Analysis

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

## VII. Taking or Damaging Implication Analysis

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

YES	NO	
XX		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	XX	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	XX	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	XX	4. Does the action deprive the owner of all economically viable uses of the property?
	XX	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?
	XX	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	XX	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	XX	7a. Is the impact of government action direct, peculiar, and significant?
	XX	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	XX	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?
	XX	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.

## VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Permitting and Compliance Division**  
**Air Resources Management Bureau**  
**P.O. Box 200901, Helena, Montana 59620**  
**(406) 444-3490**

**FINAL ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Bear Paw Energy, LLC - Riverview Terminal

*Montana Air Quality Permit Number:* 4631-00

*Preliminary Determination Issued:* March 17, 2011

*Department Decision Issued:* April 19, 2011

*Permit Final:* May 5, 2011

1. *Legal Description of Site:* East ½, Northwest ¼, Section 17 and SE¼, SW¼, Section 8, Township 22 North, Range 59 East, in Richland County.
2. *Description of Project:* Bear Paw Energy proposes to construct and operate an expansion of the Riverview Terminal. The facility has been operating since 1982 storing and loading natural gas liquids transported from surrounding gas plants via pipeline and truck. Spec grade liquids (propane and butane) are piped into horizontal pressurized tanks where they are stored for loading. Bear Paw Energy is proposing an expansion that would increase the facility’s potential VOC emissions to more than the permitting threshold of 25 tons per year; therefore, an MAQP would be required.
3. *Objectives of Project:* To increase capacity of the Riverview Terminal to store and transfer natural gas liquids.
4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because Bear Paw Energy demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the “no-action” alternative was eliminated from further consideration.
5. *A Listing of Mitigation, Stipulations, and Other Controls:* A list of enforceable conditions, including a BACT analysis, would be included in MAQP #4631-00.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.
7. *The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.*

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats			XX			Yes
B	Water Quality, Quantity, and Distribution			XX			Yes

		Major	Moderate	Minor	None	Unknown	Comments Included
C	Geology and Soil Quality, Stability and Moisture			XX			Yes
D	Vegetation Cover, Quantity, and Quality			XX			Yes
E	Aesthetics			XX			Yes
F	Air Quality			XX			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			XX			Yes
H	Demands on Environmental Resource of Water, Air and Energy			XX			Yes
I	Historical and Archaeological Sites			XX			Yes
J	Cumulative and Secondary Impacts			XX			Yes

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats

Terrestrials may be present in the surrounding area. Issuance of MAQP #4631-00 would permit an expansion of an existing source of emissions. This project would increase emissions of VOC at the facility. Conditions and limitations in the permit would limit the allowable emissions. Minor effects to terrestrial and aquatic life and habitats would be expected.

B. Water Quality, Quantity and Distribution

The proposed project would not result in a direct discharge to surface waters. Water usage may be required as a method to control fugitive dust emissions associated with unpaved roads and areas and construction related activity within the proposed project area.

The liquids to be handled at this facility would be volatile, which would limit the ability of any leak to travel to and impair surface waters. Proper operations and inspections would be necessary not only as a permit condition, but for safe operation of the facility and to prevent loss of product which produces revenue. Any impacts to water quality as a result of leaks would be expected to be minor.

Because the project would involve approximately 19.25 acres of ground disturbance, a general storm water permit would be required for construction related activity. Best Management Practices would be required to ensure any discharge of storm water does not cause or contribute to a violation of water quality standards. Therefore, impacts to water quality associated with temporary construction related activities would be expected to be minor.

The Department would expect minor effects to water quality, quantity, and distribution as a result of issuance of MAQP #4631-00.

C. Geology and Soil Quality, Stability and Moisture

Minor modifications to soil quality, stability, and moisture associated with grading and stabilization of soils with gravel surfaces would be expected. As necessary, water may be used to minimize dust during construction activities and travel on unpaved portions of facility roads. Minor impacts to geology and soil quality, stability, and moisture would be expected.

D. Vegetation Cover, Quantity, and Quality

Minor effects to vegetation cover, quantity, and quality would potentially be present in converting existing agricultural type vegetation of soil to that of industrial use. This change is limited to areas owned or by Bear Paw Energy or leased from the railroad. Water or chemical treatment of unpaved areas and construction related activity may be necessary to control fugitive emissions. Control of fugitive dust emissions would minimize any pollutant deposition effects to surrounding vegetation. Effects would be expected to be minor.

E. Aesthetics

The project would increase the number of tanks, loading spots, and associated equipment on-site. An increase in activity during installation of the equipment, and increase in loading activity upon completion of the project, would be expected. Construction related noise would be expected to normally occur between 7:00 am and 6:00 pm. An increase in industrial activity would be expected as a long term impact. However, the project expands a facility which has been operating since 1982. The Department would expect minor impacts to aesthetics as a result of issuing MAQP #4631-00.

F. Air Quality

Issuance of MAQP #4631-00 would permit an increase in VOC emissions at the facility. The application, and conditions and limitations which would be placed in the permit, would require the facility to be constructed and operated in a manner which would minimize these emissions. The facility would remain a minor source of emissions. Minor effects to air quality would be expected as a result of issuing MAQP #4631-00.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The Department contacted the Montana Natural Heritage Program utilizing the Natural Resources Information System to identify any species of special concern in the general area in which the expansion is proposed. Thirteen species of special concern were identified. The Department has summarized the findings and expected impacts below.

The Pallid Sturgeon, the Paddlefish, the Shortnose Gar, the Sturgeon Chub, the Sicklefin Chub, the Blue Sucker, and the Sauger are fish species identified to be of special concern in streams located relatively close to the proposed facility expansion. As discussed in Section 7.B, Water Quality, Quantity, and Distribution, above, and Section 7.H, Demands on Environmental Resource of Water, Air and Energy, below, minor impacts would be expected to surrounding surface waters as a result of issuing MAQP #4631-00. MAQP #4631-00 would contain limitations and conditions which would require control of fugitive dust from unpaved areas of the area; therefore, pollutant deposition would be expected to be minimal. Minor impacts would be expected to these fishes.

The Least Tern is a small migratory bird identified as a species of special concern. This bird winters in Central America, the Caribbean and northern South America. Many spend their whole first year in their wintering area. The Least Tern arrives at its breeding grounds in late April. The breeding colonies are not dense and may appear along either marine or estuarine shores, or on sandbar islands in rivers, in areas free from humans or predators. The Least Tern hunts primarily in shallow estuaries and lagoons, where smaller fishes are abundant. It hovers until spotting prey, and then plunges into the water without full submersion to extract dinner. As previously discussed, minor, if any, long term impacts to surface waters would be expected

as a result of issuing MAQP #4631-00. This proposed expansion would occur at an existing facility owned by Bear Paw Energy. Furthermore, Bear Paw Energy, in applying for MAQP #4631-00, included information indicating that the preferable habitat for the Least Tern is not present near the proposed expansion. The Department would expect minor impacts to the Least Tern.

The Red-headed Woodpecker is a medium sized woodpecker identified as a species of special concern which may be located in the area. The adults of both sexes have a bright red color on their entire head, neck and throat. With no systematic surveys completed within the state, little is known about Red-headed Woodpecker habitat in Montana. When they have been observed, they are usually found along major rivers having riparian forest associated with them. No known active management is ongoing for Red-headed Woodpeckers in the state. In fact, the species is virtually unmonitored in Montana. With impacts to vegetation, water quality, terrestrials, and air quality expected to be minor; the Department would expect any discernable impacts to the Red-Headed Woodpecker to be minor.

Townsend's Big-eared Bat has been identified as a species of special concern which may be in the area. It is a bat with extremely long, brownish ears that are joined at the base. The diet and foraging behavior of Townsend's Big-eared Bat in Montana have not been reported or studied. The Townsend's Big-eared Bat is thought to feed on various nocturnal flying insects near the foliage of trees and shrubs. The response by Townsend's Big-eared Bats to human activities is largely undocumented in Montana. The maternity colony at Lewis and Clark Caverns has persisted for over a century, even though it is exposed daily to tour groups. Therefore, the Department would not expect the increased presence of human activity alone to impact these bats. Based on review of satellite imagery, no natural features within the proposed project area indicate the potential for roosting habitat for the bat. With impacts to vegetation, water quality, terrestrials, and air quality expected to be minor; the Department would expect any impacts to the Townsend's Big-eared Bat to be minor.

The Meadow Jumping Mouse was a mouse identified as a species of special concern which may be in the area. The Meadow Jumping Mouse is generally described as a species which occupies moist lowland habitats rather than drier uplands, preferring relatively dense vegetation in open grassy and brushy areas of marshes, meadows, swamps, open conifer forest, and often favor sites bordered by small streams. On the Northern Great Plains this usually results in its restriction primarily to riparian habitats. They hibernate through winter, emerging in spring. Population density varies considerably from year to year, with no information on population density or trends in Montana. No special management activities have been developed or implemented for this species in Montana. With impacts to vegetation and water quality expected to be minor, the Department expects no more than a minor impact to the Meadow Jumping Mouse.

The Spiny Softshell is a turtle identified as a species of special concern which may be in the area. Generally, the Spiny Softshell is primarily a riverine species, occupying large rivers and river impoundments, but also occurs in lakes, ponds along rivers, pools along intermittent streams, bayous, irrigation canals, and oxbows. It usually is found in areas with open sandy or mud banks, a soft bottom, and submerged brush and other debris. Spiny Softshells forage in the water, often in shallows with vegetation. They are considered to be generalist carnivores, and usually feed on the bottom. Major foods are crayfish, aquatic insects, and fishes; but mollusks, worms, isopods, amphibians, carrion, and vegetation also are eaten. Montana populations of the Spiny Softshell are poorly understood, making management of them more difficult. With minor impacts expected to water quality, the Department would expect minor, if any discernable impacts at all, to the Spiny Softshell.

Pale-spiked Lobelia is an herbaceous perennial with unbranched stems identified as a species of special concern which may be in the area. MAQP #4631-00 would permit an expansion of an existing facility on land already designated for such uses, and would contain limitations and conditions to minimize pollutant deposition impacts to surrounding vegetation. The Department would expect minor impacts to surrounding Pale-spiked Lobelia.

#### H. Demands on Environmental Resource of Water, Air and Energy

Water may be necessary to control fugitive dust emissions from unpaved roads. Air emissions would be limited based on limitations and conditions which would be placed in MAQP #4631-00. The project would be storing and delivering potential energy in liquid fuel form. Demands on water, air, and energy, would be expected to be minor.

#### I. Historical and Archaeological Sites

The Department contacted the State Historic Preservation Office (SHPO) for any information available regarding the presence of any recorded cultural resource sites within the designated search locale. The Cultural Resource Information Systems identified three sites which may be eligible for listing in the National Register, however, no sites that are officially registered. These records consisted of two irrigation systems and one railroad, privately owned. The Department forwarded information from the SHPO search to Bear Paw Energy.

It is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. Therefore, the presence of eligible structures at any location is normal. The proposed project is for the addition of equipment on a site already owned and/or leased by Bear Paw Energy. In addition, the project expands upon an existing facility at the site that has been operating since 1982. Construction activities would involve the ground disturbance of approximately 19.25 acres on land that is owned and/or leased by Bear Paw Energy. Conditions and limitations which would be placed in MAQP #4631-00 would limit air quality related impacts to any cultural resource outside the boundaries of the property owned.

Bear Paw Energy provided information to the Department regarding actions planned to be taken to ensure mitigation of any potential effects to the irrigation ditches. Ongoing coordination with the Lower Yellowstone Irrigation Project (LYIP) on the design and plans for the irrigation ditch(es) is expected. The building plan involves rails to cross over the ditch, and also includes some upgrades to occur at the ditch inlet. This information is located within the air quality permit application. The Department would expect no more than a minor impact to any historical or archaeological sites as a result of issuance of MAQP #4631-00.

#### J. Cumulative and Secondary Impacts

The Department has determined there to be minor impacts to the individual physical and biological considerations above. The project takes place on land already owned by Bear Paw Energy, and impacts directly associated with issuance of MAQP #4631-00 outside the property boundaries are expected to be minor. Cumulatively, the Department would expect minor impacts to physical and biological considerations. Secondary impacts would be expected to be minor.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			XX			Yes
B	Cultural Uniqueness and Diversity			XX			Yes
C	Local and State Tax Base and Tax Revenue			XX			Yes
D	Agricultural or Industrial Production			XX			Yes
E	Human Health			XX			Yes
F	Access to and Quality of Recreational and Wilderness Activities			XX			Yes
G	Quantity and Distribution of Employment			XX			Yes
H	Distribution of Population			XX			Yes
I	Demands for Government Services			XX			Yes
J	Industrial and Commercial Activity			XX			Yes
K	Locally Adopted Environmental Plans and Goals			XX			Yes
L	Cumulative and Secondary Impacts			XX			Yes

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores

B. Cultural Uniqueness and Diversity

MAQP #4631-00 would permit an expansion of an existing facility. An increase in the number of employees at the site would be expected to occur. Minor impacts would be expected to Social Structures and Mores and Cultural Uniqueness and Diversity.

C. Local and State Tax Base and Tax Revenue

An increase in the number of employees, and the volume of natural gas liquids handled by the facility. Minor impacts to local and state tax base and tax revenue would be expected.

D. Agricultural or Industrial Production

MAQP #4631-00 would permit an expansion of an existing facility. The expansion would take place on land owned and leased by Bear Paw Energy. An increase in industrial production would be expected. Minor impacts to agricultural and industrial production would be expected as a result of issuance of MAQP #4631-00.

E. Human Health

MAQP #4631-00 would contain limitations and conditions derived from rules designed to protect human health. Minor impacts would be expected to human health.

F. Access to and Quality of Recreational and Wilderness Activities

MAQP #4631-00 would permit an expansion of an existing facility. The expansion would take place on land owned and leased by Bear Paw Energy. An increase in industrial production and activity would be expected. Minor impacts of access to and quality of recreational and wilderness activities would be expected.

G. Quantity and Distribution of Employment

The proposed project would result in an increase of approximately 6 employees, therefore, minor impacts to quantity and distribution of employment would be expected.

H. Distribution of Population

The proposed project would result in an increase of approximately 6 employees. A temporary increase in population in the area may result from construction related activities. The Department would expect minor impacts to the distribution of population.

I. Demands for Government Services

Demands for government services would include obtaining the proper permits and the compliance activities associated with those permits. The Department would expect minor impacts to demands for government services.

J. Industrial and Commercial Activity

A temporary increase in industrial and commercial activity would be expected during the construction phase of the project. Impacts would be expected to be relatively minor and short-lived. An increase in general industrial activity as a result of increased capacity of the facility would be expected. As an increase associated with an existing facility, the Department would expect impacts to be minor.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans and goals for which issuance of MAQP #4631-00 would affect. The permit conditions and limitations would be derived from rules designed to protect public health.

L. Cumulative and Secondary Impacts

The Department would expect minor impacts to the individual economic and social considerations above. Cumulatively, the Department would expect minor impacts. Secondary impacts would be expected to be minor.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the construction and operation of an expansion of a natural gas liquids storage, transfer, and loading facility. MAQP #4631-00 includes conditions and limitations to ensure the facility would operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Shawn Juers  
Date: 3/10/2011