

AIR QUALITY PERMIT

Issued To: Bear Paw Energy, LLC Permit: #3330-00
Charlie Creek Compressor Station Application Complete: 05/10/04
1400 16th Street, Suite 310 Preliminary Determination Issued: 06/07/04
Denver, CO 80202 Department's Decision Issued: 07/08/04
Permit Final: 07/24/04
AFS: #083-0037

An air quality permit, with conditions, is hereby granted to Bear Paw Energy, LLC, Charlie Creek Compressor Station (Bear Paw), 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

Permit #3330-00 is issued to Bear Paw for the construction and operation of a natural gas compressor station. A complete list of the permitted equipment is contained in Section I.A of the permit analysis

B. Plant Location

The facility is located approximately 20 miles northwest of Sidney, Montana, in the SW¹/₄ of the SE¹/₄ of Section 14, Township 24 North, Range 55 East, in Richland County, Montana.

SECTION II. Conditions and Limitations

A. Operational and Emission Limitations

1. Bear Paw shall not operate more than five natural gas compressor engines at any given time and the maximum rated design capacity of each engine shall not exceed 530-horsepower (hp) (ARM 17.8.749).
2. Each compressor engine shall be a lean burn engine with a catalytic oxidation unit and an air-to-fuel ratio (AFR) controller. The pound per hour (lb/hr) emission limits for each of the engines shall be determined using the following equation and pollutant specific grams per horsepower-hour (g/hp-hr) emission factors (ARM 17.8.752):

Equation

Emission Limit (lb/hr) = Emission Factor (g/bhp-hr) * maximum rated design capacity of engine (bhp) * 0.002205 lb/g

Emission Factors

Oxides of Nitrogen (NO_x): 1.0 g/hp-hr
Carbon Monoxide (CO): 0.5 g/hp-hr
Volatile Organic Compounds (VOC): 0.5 g/hp-hr

3. Bear Paw shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6-consecutive minutes (ARM 17.8.304).
4. Bear Paw shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
5. Bear Paw shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.749).
6. Bear Paw's emergency flare shall be limited to 500 hours of operation during any rolling 12-month time period (ARM 17.8.749 and ARM 17.8.1204).

B. Testing Requirements

1. Each of the compressor engines shall be initially tested for NO_x and CO, concurrently, to demonstrate compliance with the emission limits as calculated in Section II.A.2. The initial source testing shall be conducted within 180 days of the initial start up date of the compressor engine(s). After the initial source test, additional testing shall continue on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department of Environmental Quality (Department) (ARM 17.8.105 and ARM 17.8.749).
2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Bear Paw 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 actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).
2. Bear Paw shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by Bear Paw 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).
4. Bear Paw shall document, by month, the hours of operation of the emergency flare. By the 25th day of each month, Bear Paw shall total the flare operating hours during the previous 12 months to verify compliance with the limitation in Section II.A.6. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).
5. Bear Paw 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 17.8.1204 and ARM 17.8.1207).

D. Notification

1. Bear Paw shall provide the Department with written notification of commencement of construction of the compressor station within 30 days after commencement of construction (ARM 17.8.749).
2. Bear Paw shall provide the Department with written notification of the actual start-up date(s) of the compressor engine(s) within 15 days after the actual start-up date(s) (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Bear Paw shall allow the Department’s representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if Bear Paw fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bear Paw 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 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 Department's decision on the application is not final unless 15 days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy the air quality permit 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, as amended by the 1991 Legislature, failure to pay the annual operation fee by Bear Paw may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis
Bear Paw Energy, LLC
Charlie Creek Compressor Station
Permit #3330-00

I. Introduction/Process Description

Bear Paw Energy, LLC, Charlie Creek Compressor Station (Bear Paw) is permitted for the construction and operation of a natural gas compressor station located in the Southeast ¼ of the Southwest ¼ of Section 14, Township 24 North, Range 55 East, in Richland County, Montana.

A. Permitted Equipment

The facility consists of the following equipment:

- (5) Waukesha H24 GL natural gas fired compressor engines with a maximum rated design capacity equal to or less than 530-horsepower (hp) each;
- (2) 0.25 million British thermal unit per hour (MMBtu/hr) heaters (Line and Building); and
- (3) 400 barrel (bbl) condensate storage tanks.

B. Source Description

The Bear Paw compressor station compresses and transports natural gas from nearby gas fields. The 5 natural gas-fired compressor engines compress the gas for transmission through the pipeline.

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 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 PM₁₀

Bear Paw 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 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. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. Bear Paw will utilize natural gas in its fuel burning equipment, which will meet this limitation.
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 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 60.

The compressor station is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK. In addition, 40 CFR 60, Subpart LLL is not applicable to the compressor station because the facility does not utilize a sweetening unit to process sour gas.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the applicable provisions of 40 CFR Part 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR Part 63, Subpart HH requirements, certain criteria must be met. First, the facility must be a major source of Hazardous Air Pollutants (HAP) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be major for HAPs must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage facility or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR Part 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR Part 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HH. Based on the information submitted by Bear Paw, the compressor station is not subject to the provisions of 40 CFR Part 63, Subpart HH because the facility is not a major source of HAPs.

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural

gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. In addition, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Second, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Based on the information submitted by Bear Paw, the compressor station is not subject to the provisions of 40 CFR 63, Subpart HHH because the facility is not a major source of HAPs.

40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. Owners or operators of facilities that utilize reciprocating internal combustion engines (RICE) and that are a major source of HAPs, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart ZZZZ. In order for a facility that utilizes a RICE to be subject to 40 CFR Part 63, Subpart ZZZZ requirements, certain criteria must be met. The RICE must have a maximum rated design capacity greater than 500-hp and the facility must be a major source of HAPs. Based on the information submitted by Bear Paw, the compressor station is not subject to the provisions of 40 CFR 63, Subpart ZZZZ because the facility is not a major source of HAPs.

- D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:
1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.402 Requirements. Bear Paw must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or altered stacks for the Charlie Creek Compressor Station is below the allowable 65-meter GEP stack height.
- E. 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. Bear Paw submitted the appropriate permit application fee for the current permit action.
 2. ARM 17.8.505 When Permit Required--Exclusions. 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. 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 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 prorate the required fee amount.

- F. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. The Charlie Creek Compressor Station has a PTE greater than 25 tons per year of oxides of nitrogen (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC); therefore, an air quality permit is required.
 3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
 4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
 5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration or use of a source. Bear Paw 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 submitted an affidavit of publication of public notice for the April 28, 2004, 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 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 Bear Paw of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
 11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 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. 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.
- G. 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 since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. 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 HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of PM₁₀ in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3330-00 for Bear Paw, the following conclusions were made:
 - a. The facility's permitted PTE is less than 100 tons/year for any pollutant. Permit #3330-00 includes federally enforceable limits to keep emissions below 100 tons/year.
 - 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 PM₁₀ 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, nor a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.
 - h. 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 potential to emit.
 - 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 potential to emit, does not require the source to obtain an air quality operating permit.
 - ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

Bear Paw has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and, thus a Title V operating permit is not required. The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. Bear Paw 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 requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

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

III. BACT Determination

A BACT determination is required for each new or altered source. Bear Paw shall install on the new or altered source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis was submitted by Bear Paw in Permit Application #3330-00, addressing some available methods of controlling emissions from the sources used at the compressor station. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determinations.

A. 530-hp Compressor Engines

1. NO_x BACT

Under the NO_x BACT analysis, the following control technologies, which are ranked in order of the highest control efficiency to the lowest control efficiency, were reviewed: lean burn engine with a selective catalytic reduction (SCR) unit; lean burn engine with an air-to-fuel ratio (AFR) controller; lean burn engine with no additional controls; rich burn engine with a non-selective catalytic reduction (NSCR) unit and an AFR controller; rich burn engine with an NSCR unit; rich burn engine with an AFR controller; and rich burn engine with no additional controls.

Lean Burn Engine with an SCR Unit

SCR is a post combustion technology that has been shown to be effective at reducing NO_x emissions from lean burn engines. SCR units can achieve NO_x control efficiencies as high as 90% for lean burn engines that are operated at a constant load. An SCR unit selectively reduces NO_x emissions by injecting either liquid anhydrous ammonia or aqueous ammonium hydroxide into the exhaust gas stream prior to the gas stream reaching the catalyst. The catalyst is typically made from noble metals, base metal oxides such as vanadium and titanium, and zeolite-based material. NO_x, NH₃, and O₂ react on the surface of the catalyst to form N₂ and H₂O. For an SCR unit to operate properly, the exhaust gas must be within a particular temperature range (typically between 450°F and 850°F). The catalyst that is utilized dictates the temperature range. Exhaust gas temperatures greater than the upper limit will pass the NO_x and NH₃ through the catalyst prior to the reaction. NH₃ emissions, called ammonia slip, are a key consideration when specifying an SCR unit. SCR units are only applicable to lean burn engines because a high oxygen concentration (as found in lean burn engines) is needed for the unit to operate properly. In addition, for engines that typically operate at variable loads, such as engines utilized for natural gas transmission, an SCR unit may not function effectively and may cause either periods of ammonia slip or periods of insufficient ammonia injection. Because an SCR unit may not function effectively and may cause either periods of ammonia slip or periods of insufficient ammonia injection for engines that typically operate at variable loads, the Department determined that an SCR unit does not constitute BACT for the 530-hp compressor engines.

Lean Burn Engine with an AFR Controller

The NO_x emissions from a lean-burn engine can be stabilized by installing an electronic AFR controller. This device maintains the proper air to fuel ratio that will optimize the performance of the lean burn engine. A lean-burn engine with an AFR controller achieves approximately the same NO_x emissions rate as a rich-burn engine fitted with an NSCR unit and an AFR controller.

As proposed by Bear Paw, the Department determined that a lean burn engine with an AFR controller constitutes BACT for the reduction of NO_x emissions resulting from the operation of the proposed 530-hp natural gas compressor engines. A lean burn engine with an AFR controller typically constitutes BACT for lean burn engines. A lean burn engine with an AFR controller effectively reduces NO_x emissions and represents a technically, economically, and environmentally feasible option for the control of NO_x emissions resulting from internal combustion engines such as those proposed for the current permit action. Further, it has been demonstrated that a lean burn engine with an AFR controller is capable of achieving the pound per hour BACT emission limit, as calculated in Section II.A.2 of Permit #3330-00, established for the 530-hp Waukesha H24 GL compressor engine. The pound per hour limit was established as BACT by using 1.0 gram per horsepower-hour (g/hp-hr). Lean burn engine technology with an AFR controller results in the highest technically feasible control of NO_x emissions (lowest NO_x emission rate) resulting from the operation of an internal combustion engine operated for the purpose of natural gas transmission. Therefore, because no other collateral environmental, energy, or economic impacts preclude the use of this technology, the Department eliminated all other technically feasible control options from further consideration and determined that this control strategy constitutes BACT for NO_x emissions from the 530-hp compressor engines.

2. CO BACT

As part of the CO BACT analysis, the following control technologies, which are ranked in order of the highest control efficiency to the lowest control efficiency, were reviewed: lean burn engine with a catalytic oxidation unit and an AFR controller; lean burn engine with a catalytic oxidation unit; lean burn engine with an AFR controller; rich burn engine with a non-selective catalytic reduction (NSCR) unit and an AFR controller; lean burn engine with no additional controls; rich burn engine with an NSCR unit; rich burn engine with an AFR controller; and rich burn engine with no additional controls.

Lean Burn Engine with a Catalytic Oxidation Unit and an AFR Controller

Catalytic Oxidation is a post combustion technology that has been applied to oxidize CO emissions from lean burn engines. In a catalytic oxidation system, CO passes over a catalyst, usually a noble metal, which oxidizes the CO to CO₂ at efficiencies of 70-90%. In order to provide for the most effective use of the catalyst in a catalytic oxidation unit, it is necessary to install an electronic AFR controller. An AFR controller maintains the proper air to fuel ratio that will optimize the degree of reducing agents in order to provide maximum emission reduction while minimizing agents that can poison the catalyst.

As proposed by Bear Paw, the Department determined that a lean burn engine with a catalytic oxidation unit and an AFR controller constitutes BACT for the reduction of CO emissions resulting from the operation of the proposed 530-hp natural gas compressor engines. A lean burn engine with a catalytic oxidation unit and an AFR controller typically constitutes BACT for lean burn engines. A lean burn engine with a catalytic oxidation unit

and an AFR controller effectively reduces CO emissions and represents a technically, economically, and environmentally feasible option for the control of CO emissions resulting from internal combustion engines such as those proposed for the current permit action. Further, it has been demonstrated that a lean burn engine with a catalytic oxidation unit and an AFR controller is capable of achieving the pound per hour BACT emission limit, as calculated in Section II.A.2 of Permit #3330-00, established for the 530-hp Waukesha H24 GL compressor engine. The pound per hour limit was established as BACT by using 0.50 g/hp-hr. Lean burn engine technology with an AFR controller and an oxidation catalyst results in the highest technically feasible control of CO emissions (lowest CO emission rate) resulting from the operation of an internal combustion engine operated for the purpose of natural gas transmission. Therefore, because no other collateral environmental, energy, or economic impacts preclude the use of this technology, the Department eliminated all other technically feasible control options from further consideration and determined that this control strategy constitutes BACT for CO emissions from the 530-hp compressor engines.

3. VOC BACT

The Department is not aware of any BACT determinations that have required controls for VOC emissions from natural gas fired compressor engines. No additional controls and burning pipeline quality natural gas typically constitutes BACT for natural gas compressor engines. Therefore, the Department determined that no additional controls and burning pipeline quality natural gas to meet a lb/hr emission limit, as calculated in Section II.A.2 of Permit #3330-00 constitutes BACT for each of the proposed 530-hp compressor engines.

4. PM₁₀/SO₂ BACT

The Department is not aware of any BACT determinations that have required controls for PM₁₀ or SO₂ emissions from natural gas fired compressor engines. Due to the relatively small amount of PM₁₀ and SO₂ emissions from the proposed engines, any add-on controls would be cost prohibitive. Therefore, the Department determined that no additional controls and burning pipeline quality natural gas will constitute BACT for PM₁₀ and SO₂ emissions from each of the 530-hp compressor engines.

B. 0.25 MMBtu/hr Heaters

PM₁₀, NO_x, VOC, CO, and SO_x Emissions

The Department is not aware of any BACT determinations that have required controls for PM₁₀, NO_x, VOC, CO, or SO_x emissions from small natural gas fired heaters. Due to the relatively small amount of PM₁₀, NO_x, VOC, CO, and SO_x emissions from the proposed heaters, any add-on controls would be cost prohibitive. Therefore, the Department determined that no additional controls and burning pipeline quality natural gas will constitute BACT for PM₁₀, NO_x, VOC, CO, and SO_x emissions from the 0.25 MMBtu/hr heaters.

C. 400 bbl Condensate Storage Tanks

VOC Emissions

The only pollutant emitted from the 400 bbl condensate storage tanks is VOC. The Department is not aware of any BACT determinations that have required controls for emissions from condensate storage tanks. Due to the relatively small amount of VOC emissions from the

proposed condensate storage tanks any add-on controls would be cost prohibitive. Therefore, the Department determined that no additional controls and best management practices will constitute BACT for VOC emissions from the condensate storage tanks. Best management practices would include operating the equipment as it was designed to be operated and fixing any malfunctions as soon as reasonably practicable.

D. Emergency Flare

PM₁₀, NO_x, CO, VOC, and SO₂ Emissions

The emergency flare would be used to maintain a consistent back pressure at the natural gas well head during facility upsets (emergencies) that result in compressor shut down. Maintaining consistent back pressure during compressor shut down is necessary to prevent damage to, and reduce production of the natural gas well head. BACT for the emergency flare is unique because the flare is the process equipment as well as the control equipment. When natural gas is routed to the flare to maintain consistent back pressure, the facility is losing production. Therefore, Bear Paw would have no desire to route natural gas to the flare, other than in emergency situations. Because the emergency flare will be operated in emergency situations and because natural gas, which is an extremely clean burning fuel, would be the material routed to the flare, the Department determined that no additional controls will constitute BACT for the flare.

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

Source	Ton/year				
	PM ₁₀	NO _x	VOC	CO	SO _x
530-hp Waukesha Compressor Engine #1	0.22	5.13	2.54	2.54	0.01
530-hp Waukesha Compressor Engine #2	0.22	5.13	2.54	2.54	0.01
530-hp Waukesha Compressor Engine #3	0.22	5.13	2.54	2.54	0.01
530-hp Waukesha Compressor Engine #3	0.22	5.13	2.54	2.54	0.01
530-hp Waukesha Compressor Engine #3	0.22	5.13	2.54	2.54	0.01
0.25 MMBtu/hr Building Heater	0.01	0.09	0.00	0.04	0.00
0.25 MMBtu/hr Line Heater	0.01	0.09	0.00	0.04	0.00
400 bbl Condensate Storage Tank #1	0.00	0.00	3.54	0.00	0.00
400 bbl Condensate Storage Tank #2	0.00	0.00	3.54	0.00	0.00
400 bbl Condensate Storage Tank #3	0.00	0.00	3.54	0.00	0.00
Emergency Flare (including flare pilot emissions)	0.00	7.46	15.31	40.48	0.00
Total	1.12	33.29	37.77	53.26	0.05

530-Hp Compressor Engines (5 Engines)

Brake Horsepower: 530 bhp
Hours of Operation: 8760 hr/yr

PM₁₀ Emissions

Emission Factor: 9.91E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
Fuel Consumption: 4.50 MMBtu/hr (Maximum Design)
Calculations: 4.50 MMBtu/hr * 9.91E-03 lb/MMBtu = 0.05 lb/hr
0.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.22 ton/yr

NO_x Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: $1.00 \text{ gram/bhp-hour} * 530 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.17 \text{ lb/hr}$
 $1.17 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 5.13 \text{ ton/yr}$

VOC Emissions

Emission factor: 0.50 gram/bhp-hour (BACT Determination)
Calculations: $0.50 \text{ gram/bhp-hour} * 530 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.58 \text{ lb/hr}$
 $0.58 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.54 \text{ ton/yr}$

CO Emissions

Emission factor: 0.50 gram/bhp-hour (BACT Determination)
Calculations: $0.50 \text{ gram/bhp-hour} * 530 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.58 \text{ lb/hr}$
 $0.58 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.54 \text{ ton/yr}$

SO₂ Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
Fuel Consumption: 4.50 MMBtu/hr (Maximum Design)
Calculations: $4.50 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.003 \text{ lb/hr}$
 $0.003 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

0.25 MMBtu/hr Heaters (2 Heaters)

Maximum Capacity: 0.25 MMBtu/hr
Hours of Operation: 8760 hr/yr
Max Fuel Usage: $0.25 \text{ MMBtu/hr} * 0.001 \text{ MMScf/1 MMBtu} = 0.00025 \text{ MMScf/hr}$

PM₁₀ Emissions

Emission Factor: 7.60 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: $7.60 \text{ lb/MMScf} * 0.00025 \text{ MMScf/hr} = 0.002 \text{ lb/hr}$
 $0.002 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

NO_x Emissions

Emission factor: 94 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: $94 \text{ lb/MMScf} * 0.00025 \text{ MMScf/hr} = 0.02 \text{ lb/hr}$
 $0.02 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.09 \text{ ton/yr}$

VOC Emissions

Emission factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: $5.5 \text{ lb/MMScf} * 0.00025 \text{ MMScf/hr} = 0.001 \text{ lb/hr}$
 $0.001 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.00 \text{ ton/yr}$

CO Emissions

Emission factor: 40 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: $40 \text{ lb/MMScf} * 0.00025 \text{ MMScf/hr} = 0.01 \text{ lb/hr}$
 $0.01 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.04 \text{ ton/yr}$

SO₂ Emission

Emission factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: $0.6 \text{ lb/MMScf} * 0.00025 \text{ MMScf/hr} = 0.0002 \text{ lb/hr}$
 $0.0002 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.00 \text{ ton/yr}$

400 bbl Condensate Storage Tanks (3 Tanks)

VOC Emissions

Emission Factor: 7074.94 lb/yr (EPA Tanks, Version 4.0)
Calculations: $7074.94 \text{ lb/yr} * 0.0005 \text{ ton/lb} = 3.54 \text{ ton/yr}$

Emergency Flare

Operating Hours: 500 hr/yr (Permit Limit)

PM₁₀ Emissions (Soot)

Emission Factor: 0.00 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1)
 Calculations: 0.00 lb/MMBtu * 1050 MMBtu/MMScf * 10 MMScf/day * 1 day/24 hr = 0.00 lb/hr
 0.00 lb/hr * 500 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

NO_x Emissions

Emission Factor: 0.068 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1)
 Calculations: 0.068 lb/MMBtu * 1050 MMBtu/MMScf * 10 MMScf/day * 1 day/24 hr = 29.75 lb/hr
 29.75 lb/hr * 500 hr/yr * 0.0005 ton/lb = 7.44 ton/yr

VOC Emissions

Emission Factor: 0.14 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1)
 Calculations: 0.14 lb/MMBtu * 1050 MMBtu/MMScf * 10 MMScf/day * 1 day/24 hr = 61.25 lb/hr
 61.25 lb/hr * 500hr/yr * 0.0005 ton/lb = 15.31 ton/yr

CO Emissions

Emission Factor: 0.37 lb/MMBtu (AP-42, Chapter 13, Table 13.5-1)
 Calculations: 0.37 lb/MMBtu * 1050 MMBtu/MMScf * 10 MMScf/day * 1 day/24 hr = 161.88lb/hr
 161.88 lb/hr * 500 hr/yr * 0.0005 ton/lb = 40.47ton/yr

Emergency Flare (Pilot)**PM₁₀ Emissions**

Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
 Fuel Consumption: 0.000044 MMScf/hr (Similar Source Determination)
 Calculations: 7.6 lb/MMScf * 0.000044 MMScf/hr * 8760 hr/yr * 0.0005 ton/lb = 0.001 ton/yr

NO_x Emissions

Emission Factor: 94 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
 Fuel Consumption: 0.000044 MMScf/hr (Similar Source Determination)
 Calculations: 94 lb/MMScf * 0.000044 MMScf/hr * 8760 hr/yr * 0.0005 ton/lb = 0.02 ton/yr

VOC Emissions

Emission Factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
 Fuel Consumption: 0.000044 MMScf/hr (Similar Source Determination)
 Calculations: 5.5 lb/MMScf * 0.000044 MMScf/hr * 8760 hr/yr * 0.0005 ton/lb = 0.001 ton/yr

CO Emissions

Emission Factor: 40 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
 Fuel Consumption: 0.000044 MMScf/hr (Similar Source Determination)
 Calculations: 40 lb/MMScf * 0.000044 MMScf/hr * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

SO_x Emissions

Emission Factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
 Fuel Consumption: 0.000044 MMScf/hr (Similar Source Determination)
 Calculations: 7.6 lb/MMScf * 0.000044 MMScf/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0001 ton/yr

V. Existing Air Quality

The compressor station is located in the SW¼ of the SE¼ of Section 14, Township 24 North, Range 55 East, in Richland County, Montana. The air quality of this area is classified as either Better than National Standards or Unclassifiable/Attainment for the National Ambient Air Quality Standards (NAAQS).

VI. Ambient Air Impact Analysis

The Department determined that the impact from this permitting action is minor. The Department believes the facility, operating under the limits and conditions included in this permit, will not cause or contribute to a violation of any applicable ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

VIII. Montana Environmental Policy Act

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
Charlie Creek Compressor Station
1400 16th Street, Suite 310
Denver, Colorado 80202

Air Quality Permit Number: 3330-00

Preliminary Determination Issued: June 7, 2004

Department Decision Issued: July 8, 2004

Permit Final: July 24, 2004

1. *Legal Description of Site:* Bear Paw's Charlie Creek Compressor Station is located approximately 20 miles northwest of Sidney, Montana, in the southwest ¼ of the southeast ¼ of Section 14, Township 24 North, Range 55 East, in Richland County, Montana.
2. *Description of Project:* Bear Paw proposes to construct and operate a natural gas compressor station. The facility would consist of 5 natural gas fired compressor engines (530-hp), 2 natural gas-fired heaters (0.25MMBtu/hr), 3 condensate storage tanks (400 bbl), and an emergency flare. The facility would receive natural gas from the nearby gas fields and compress the natural gas for transmission through the pipeline.
3. *Objectives of Project:* The proposed project would provide business and revenue for Bear Paw by allowing the company to gather and sell natural gas from the area. Natural gas would be received from nearby gas fields and the gas would be compressed for transmission through a natural gas sales pipeline.
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 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 Permit #3330-00.
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			X			Yes
B	Water Quality, Quantity, and Distribution			X			Yes
C	Geology and Soil Quality, Stability and Moisture			X			Yes
D	Vegetation Cover, Quantity, and Quality			X			Yes
E	Aesthetics			X			Yes
F	Air Quality			X			Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites			X			Yes
J	Cumulative and Secondary Impacts			X			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

Minor impacts to terrestrial and aquatic life and habitats would be expected from the proposed project because deer, antelope, coyotes, geese, ducks, and other terrestrials would potentially use the area around the facility and because the facility would be a source of air pollutants. The facility would emit air pollutants and corresponding deposition of pollutants would occur; however, as described in Section 7.F. of this EA, the Department determined that any impacts from deposition would be minor. In addition, minor land disturbance would occur through facility construction activities. Any impacts from facility construction would be minor due to the relatively small size of the project and the relatively short period of time required for construction. Overall, any impacts to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity, and Distribution

Minor impacts would be expected on water quality, quantity, and distribution from the proposed project because the facility would be a source of air pollutants. The facility is a central compressor station, not a production field facility; therefore, no discharges into surface water would occur from operating the facility. However, minor amounts of water may be required to control fugitive dust emissions from the access roads and the general facility property. In addition, the facility would emit air pollutants and corresponding deposition of pollutants would occur; however, as described in Section 7.F. of this EA, the Department determined that any impact resulting from the deposition of pollutants would be minor.

Further, water quality, quantity, and distribution would not be impacted from constructing the facility because there is no surface water at or relatively close to the site. Furthermore, no discharges into surface water would occur and no use of surface water would be expected for facility construction. Therefore, no impacts to water quality, quantity, and distribution would be expected from facility construction. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Minor impacts would occur on the geology and soil quality, stability, and moisture from the proposed project because minor construction would be required to develop the facility. Small buildings would be constructed, natural gas pipelines would be installed, and an access road would be developed. In addition, no discharges, other than air emissions, would occur at the facility. Any impacts to the geology and soil quality, stability and moisture from facility construction would be minor due to the relatively small size of the project.

Further, deposition of pollutants would occur; however, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the areas surrounding the site would be minor. Overall, any impacts to the geology and soil quality, stability, and moisture would be minor.

D. Vegetation Cover, Quantity, and Quality

Minor impacts would occur on vegetation cover, quantity, and quality because minor construction would be required to develop the facility. Small buildings would be constructed, natural gas pipelines would be installed, and an access road would be developed.

No discharges, other than air emissions, would occur at the facility. Any impacts to the vegetation cover, quantity, and quality from facility construction would be minor due to the relatively small size of the project.

The facility would be a source of air pollutants and corresponding deposition of pollutants would occur; however, as described in Section 7.F of this EA, the Department determined that any impacts resulting from the deposition of pollutants on the existing vegetation cover, quantity, and quality would be minor. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

Minor impacts would result on the aesthetic value of the area because the facility would be a new facility. Small buildings would be constructed to house the engines, natural gas pipelines would be installed, and an access road would be developed. However, any visual aesthetic impacts would be minor because natural gas compressor stations are relatively small industrial facilities, require minimal amounts of daily traffic, and are generally very low profile facilities.

The facility would also create additional noise in the area. However, any auditory aesthetic impacts would be minor because the engines would be located within a building and compressor engines would be required to operate with non-selective catalytic reduction (NSCR) units and NSCR units are typically designed to be operated with mufflers installed. Overall, any aesthetic impacts would be minor.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the facility would emit the following air pollutants: PM₁₀; NO_x; CO; VOC (including HAPs); and SO_x. Air emissions from the facility would be minimized by limitations and conditions that would be included in Permit #3330-00. Conditions would include, but would not be limited to, BACT emission limits, opacity limitations on the proposed engines, and opacity limitations on the general facility. In addition, based on previous analyses of similar sources operating under

similar conditions, the Department believes that the emissions resulting from the proposed engines would exhibit good dispersion characteristics resulting in minor deposition impacts to the affected area.

Since controlled potential emissions from the proposed station would exhibit good dispersion characteristics and would not exceed any Montana ambient air quality modeling threshold, the Department determined that controlled emissions from the source would not cause or contribute to a violation of any ambient air quality standard. Therefore, any impacts to air quality from the proposed facility would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS). The NRIS search did not identify any known species of special concern located within the proposed project area. In this case, the project area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Due to the minor amounts of construction that would be required, the relatively low levels of pollutants that would be emitted, and because the NRIS search did not identify any species of special concern in the area of the proposed facility, the Department determined that it would be unlikely that the proposed project would impact any species of special concern and that any potential impacts would be minor.

H. Demands on Environmental Resources of Water, Air, and Energy

The proposed project would have minor impacts on the demands for the environmental resources of air and water because the facility would be a source of air pollutants. Deposition of pollutants would occur as a result of operating the facility; however, as explained in Section 7.F of this EA, the Department determined that any impacts on air and water resources from the proposed project would be minor.

The proposed project would be expected to have minor impacts on the demand for the environmental resource of energy because power would be required at the site. Further, the facility would result in a minor impact to the non-renewable energy resource of natural gas in the proposed area of operation because the gas would be compressed and transferred resulting in a reduction of that resource in the area. The impact on the demand for the environmental resource of energy would be minor because the facility would be relatively small by industrial standards. Overall, the impacts for the demands on the environmental resources of water, air, and energy would be minor.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites located on or near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are no previously recorded historic or archaeological sites within the proposed area. SHPO records also indicate that no cultural resource inventories have been conducted within the defined area. Therefore, SHPO recommends that, prior to any construction related ground disturbance, a cultural resource inventory be conducted for this purpose of determining if any such resources exist on or near the proposed site of operation. However, neither the Department nor SHPO has the authority to require that a cultural resource inventory be conducted. Overall, due to the relatively small size and minimal ground disturbance required for construction of the facility, the Department determined that it is unlikely that the proposed project would have any impact on any historical and archaeological site.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the project and the minor amount of construction activities associated with this type of facility. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3330-00.

Additional facilities (production field facilities) would likely locate in the area to withdraw natural gas from the nearby area and supply this station with gas for dehydration, compression, and transmission. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Environmental impacts from any future facilities would be assessed through the appropriate permitting process.

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			X			Yes
B	Cultural Uniqueness and Diversity			X			Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population			X			Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

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

- A. Social Structures and Mores
- B. Cultural Uniqueness and Diversity

The proposed project would cause minor, if any, impacts to the social structures and mores and cultural uniqueness and diversity of the area because the proposed project would take place in a relatively remote location. Further, the operation of a compressor station of this type necessitates relatively few employees for normal operations and would likely not result in any, or very little, immigration of new people to the area for employment purposes; thereby, having little if any impact on the social structures and mores and cultural uniqueness and diversity in the area.

Additional activity (vehicle traffic, construction equipment, etc.) would be noticeable during facility construction; however, compressor stations typically do not require day-to-day employees and once the facility is constructed, activities associated with the operation of the facility would be minor. Overall, any impacts to the above social and economic resources in the area would be minor.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor impacts to the local and state tax base and tax revenue because relatively few new employees would be expected as a result of constructing the facility. Further, the proposed project would necessitate relatively little construction and typically would not require an extended period of time for completion; therefore, any construction related jobs would be temporary and any corresponding impacts on the tax base/revenue of a given area would be minor. Overall, any impacts to the local and state tax base and tax revenue would be minor.

D. Agricultural or Industrial Production

The land at the proposed location is rural agricultural grazing land; however, because the facility would be relatively small, the proposed project would result in only minor impacts to agricultural production. The proposed project would have minor impacts to industrial production because the proposed project would be a new industrial source locating in the proposed area. However, because the facility would be relatively small by industrial standards, the project would likely not result in additional industrial sources (not directly associated with operations) moving to a given area.

Additional associated facilities (production field facilities) would likely locate in the area to withdraw the natural gas from the nearby area to supply the station with gas to be dehydrated and compressed for transmission through a natural gas pipeline. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Impacts from any future facilities would be assessed through the appropriate permitting process. Overall, any impacts to agricultural or industrial production of the area would be minor.

E. Human Health

The proposed project would result in minor, if any, impacts to human health. As explained in Section 7.F of this EA, deposition of pollutants would occur; however, the Department determined that the proposed project would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health. Overall any impacts to public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would have minor, if any, impacts on access to recreational and wilderness activities because of the relatively remote location and the relatively small size of the facility. The proposed project would have minor impacts on the quality of recreational and wilderness activities in the area because the facility, while relatively small by industrial standards, would be visible and would produce noise. Overall any impacts to the access to and quality of recreational and wilderness activities in the area would be minor.

G. Quantity and Distribution of Employment

H. Distribution of Population

The proposed project would have minor, if any, impacts on the quantity and distribution of employment and the distribution of population in the area because relatively few permanent employees would be required for normal operations thereby resulting in relatively few, if any, new

immigration to the area. In addition, temporary construction-related positions would result from this project but any impacts to the quantity and distribution of employment from construction related employment would be minor due to the relatively small size of the facility and the relatively short time period that would be required for constructing the facility. Overall, any impacts to the quantity and distribution of employment and the distribution of population in the area would be minor.

I. Demands for Government Services

The project would result in minor impacts on the demands for government services because additional time would be required by government agencies to issue Permit #3330-00 and to assure compliance with applicable rules, standards, and conditions contained in Permit #3330-00. In addition, there would be minor impacts on the demands for government services to regulate the increase in vehicle traffic that would be associated with constructing and operating the facility. The increase in vehicle traffic would be primarily during facility construction because compressor stations typically do not require day-to-day employees. Therefore, vehicle traffic would be relatively minor due to the relatively short time period that would be required to construct the facility. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility.

J. Industrial and Commercial Activity

Only minor impacts would be expected on the local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area. The proposed project would be relatively small and would take place at a relatively remote location.

Additional facilities (production field facilities) would likely locate in the area to withdraw the natural gas from the area and supply the station with gas to be dehydrated and compressed for transmission through a natural gas pipeline. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Impacts from any future facilities would be assessed through the appropriate permitting process.

K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans or goals that would be affected by the proposed project. The permit would ensure compliance with state standards and goals.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the project, the industrial production, employment, and tax revenue (etc.) impacts resulting from the proposed project would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in Permit #3330-00.

Additional facilities (production field facilities) would likely locate in the area to withdraw the natural gas from the area and supply the station with gas to be dehydrated and compressed for transmission through a natural gas pipeline. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Impacts from any future facilities would be assessed through the appropriate permitting process.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permit action is for the construction and operation of a natural gas central compressor station. This EA assesses the impacts specific to the proposed project. Permit #3330-00 would include conditions and limitations to ensure the facility would operate in compliance with all applicable air quality rules and regulations. In addition, there are no significant impacts associated with the proposed project.

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: Montana Department of Environmental Quality; Montana Historical Society – State Historic Preservation Office; Natural Resource Information System – Montana Natural Heritage Program.

EA prepared by: M. Eric Merchant, MPH
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