

AIR QUALITY PERMIT

Issued To: Hiland Partners, LLC
Bakken Gathering Plant
P.O. Box 5122
Enid, Oklahoma 73702

Permit: #3331-00
Application Complete: 05/04/04
Preliminary Determination Issued: 06/01/04
Department's Decision Issued: 06/17/04
Permit Final: 07/03/04
AFS: #083-0038

An air quality permit, with conditions, is hereby granted to Hiland Partners, LLC (HPL), 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 #3331-00 is issued to HPL for the construction and operation of the Bakken Gathering Plant. The facility will extract natural gas liquids from field gas. 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 8 miles northwest of Sidney, Montana, in the NE¼ of the NW¼ of Section 3, Township 23 North, Range 58 East, in Richland County, Montana.

SECTION II. Conditions and Limitations

A. Emission Limitations

1. HPL shall not operate more than four natural gas compressor engines at any given time. The maximum rated design capacity of Units 1 and 2 shall not exceed 1,478-horsepower (hp), the maximum rated design capacity of Unit 3 shall not exceed 912-hp, and the maximum rated design capacity of Unit 4 shall not exceed 185-hp (ARM 17.8.749).
2. Each compressor engine shall be a rich burn engine controlled with non-selective catalytic reduction (NSCR) units and air-to-fuel (AFR) controllers. 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

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

Emission Factors

NO _x	1.0 g/hp-hr
CO	2.0 g/hp-hr
VOC	1.0 g/hp-hr

3. HPL 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. HPL 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. HPL 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. Loading tank trucks shall be restricted to the use of submerged fill and dedicated normal service (ARM 17.8.749).

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. HPL 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. HPL 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 HPL 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. Notification

1. HPL shall provide the Department with written notification of commencement of construction of the Bakken Gathering Plant within 30 days after commencement of construction.
2. Prior to installation, HPL shall provide the Department with written notification of the maximum rated design capacities of each of the four rich-burn engines to be initially installed at the facility.
3. HPL 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).

SECTION III: General Conditions

- A. Inspection – HPL 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 HPL fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving HPL 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 HPL 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
Hiland Partners, LLC
Bakken Gathering Plant
Permit #3331-00

I. Introduction/Process Description

Hiland Partners, LLC (HPL), is permitted for the construction and operation of the Bakken Gathering Plant. The facility will extract natural gas liquids from field gas and is located in the NE¼ of the NW¼ of Section 3, Township 23 North, Range 58 East, in Richland County, Montana.

A. Permitted Equipment

The facility consists of the following equipment:

- (2) natural gas fired rich burn compressor engines (Units 1 and 2) with a maximum rated design capacity equal to or less than 1,478-horsepower (hp);
- (1) natural gas fired rich burn compressor engine (Unit 3) with a maximum rated design capacity equal to or less than 912- hp;
- (1) natural gas fired rich burn compressor engine (Unit 4) with a maximum rated design capacity equal to or less than 185- hp;
- (1) fractionation unit with a 25-million British thermal units per hour (MMBtu/hr) Hot Oil Heater;
- (1) 10-MMBtu/hr Hot Oil Heater;
- (1) triethylene glycol (TEG) dehydrator and associated still vent;
- (1) truck loading station; and
- (2) 300 barrel (bbl) condensate storage tanks.

B. Source Description

The Bakken Gathering Plant will extract natural gas liquids from field gas. One natural gas fired engine will be used for inlet compression, the second and third natural gas fired engines will be used to operate the chiller, and the fourth natural gas fired engine will be used for overhead compression. The fractionation unit consists of a hot oil heater, several reboilers, multiple holding tanks, and electric refrigeration compressor, and a truck loading station. The TEG dehydration unit removes moisture from the gas prior to transmission.

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).

HPL 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

HPL 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 (PM). (2) Under this rule, HPL shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.

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 PM 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 PM 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. HPL will utilize natural gas for operating 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.
 - a. Subpart A - General Provisions applies to all equipment or facilities subject to an NSPS Subpart as listed below.
 - b. Subpart KKK - Standards of Performance for Onshore Natural Gas Processing: Sulfur Dioxide (SO₂) Emissions. HPL is an NSPS affected source because it meets the definition of a natural gas processing plant as defined in 40 CFR 60, Subpart KKK.
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 (HAPs) 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 source category 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 HPL, the facility 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 HPL, the facility 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 HPL, the Bakken Gathering Plant is not subject to the provisions of 40 CFR 63, Subpart ZZZZ because although the facility utilizes 3 RICE with a maximum rated design capacity greater than 500-hp, 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. HPL must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed heights of the new or altered stacks for HPL are 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. HPL 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 Bakken Gathering Plant has a PTE greater than 25 tons per year of nitrogen oxides (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. HPL 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. HPL 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 HPL 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 particulate matter with an aerodynamic diameter of 10 microns or less (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 #3331-00 for HPL, 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 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.

Based on these facts, the Department determined that the Bakken Gathering Plant 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. HPL 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 HPL in Permit Application #3331-00, addressing some available methods of controlling emissions from the sources used at the Bakken Gathering Plant. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determinations.

A. Compressor Engines

1. NO_x and CO BACT

As part of the NO_x and CO BACT analyses, the following control technologies were reviewed:

- Lean burn engine with a selective catalytic reduction (SCR) unit and a catalytic oxidation unit;
- Lean burn engine with an SCR unit;
- Lean burn engine with a catalytic oxidation unit;
- Lean burn engine with an air-to-fuel ratio (AFR) controller;
- Lean burn engine with no additional controls;
- Prestratified charge combustion (PCC) (i.e. lean-burn retrofit);
- 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;
- Rich burn engine with catalytic oxidation unit; and
- Rich burn engine with no additional controls.

Lean burn engines and/or PCC are technically infeasible for the project because the Btu content of the fuel gas (1,200 Btu/Scf) is too high. HPL provided information from Waukesha and Caterpillar that stated that lean burn engines of around the hp rating that HPL's project requires would not operate properly given the higher Btu content of the fuel gas. Therefore, the Department determined that all of the control options associated with lean burn engines are technically infeasible and will not constitute BACT for the proposed compressor engines. In addition, catalytic oxidation units cannot be utilized on rich burn engines because the oxygen concentration from rich burn engines is not high enough for a catalytic oxidizer to operate properly. Therefore, the Department determined that a rich burn engine with a catalytic oxidation unit is technically infeasible and will not constitute BACT for the proposed compressor engines.

Technically feasible control options, in order of the highest control efficiency to the lowest control efficiency, include:

- Rich burn engine with an 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 control.

Rich Burn Engine with an NSCR unit and an AFR Controller

An NSCR unit controls NO_x emissions by using available CO and residual hydrocarbons in the exhaust of a rich-burn engine as a NO_x reducing agent. Without the catalyst, in the presence of oxygen, the hydrocarbons will be oxidized instead of reacting with NO_x. As

the excess hydrocarbon and NO_x pass over a honeycomb or monolithic catalyst (usually a combination of noble metals such as platinum, palladium, and/or rhodium), the reactants are reduced to nitrogen (N₂), water (H₂O), and carbon dioxide (CO₂). The noble metal catalyst usually operates between 800 degrees Fahrenheit (°F) and 1,200°F; therefore, the unit would normally be mounted near the engine exhaust to maintain a high enough temperature to allow the various reactions to occur. In order to achieve maximum performance, 80% to 90% reduction of NO_x concentration, the engine must burn a rich fuel mixture, causing the engine to operate less efficiently.

In order to provide for the most effective use of the catalyst in an NSCR unit, it is necessary to install an electronic AFR controller. This device maintains the proper air-to-fuel ratio thereby increasing fuel efficiency, optimizing the level of reducing agents, and minimizing agents that can poison the catalyst. The technologies provide for the maximum NO_x and CO emission reductions.

As proposed by HPL, the Department determined that an NSCR unit with an AFR controller constitutes BACT for the reduction of NO_x and CO emissions resulting from the operation of the proposed natural gas compressor engines. NSCR/AFR control typically constitutes BACT for rich-burn compressor engines. NSCR/AFR control effectively reduces NO_x and CO emissions and represents a technically, economically, and environmentally feasible option for the control of NO_x and CO resulting from internal combustion engines such as those proposed for the current permit action. Further, it has been demonstrated that these technologies, operated together, are capable of achieving the pound per hour BACT emission limits established for the proposed compressor engines (Section II.A of Permit #3331-00). These pound per hour limits were established as BACT by using 1.0 gram per horsepower-hour (g/Hp-hr) for NO_x and 2.0 g/Hp-hr for CO. Because the highest ranking technically feasible control option was determined to be BACT, the remaining technically feasible control options (rich burn engine with an NSCR unit; rich burn engine with an AFR controller; and rich burn engine with no additional control) were eliminated from consideration and do not need to be reviewed.

2. VOC BACT

The Department is not aware of any BACT determinations that have required controls for VOC emissions from natural gas fired compressor engines. HPL proposed the use of an NSCR unit and an AFR controller to meet a lb/hr limit equivalent to 1.0 g/hp-hr. However, the Department does not consider the NSCR unit and the AFR controller to be BACT for VOC because the cost per ton of VOC reduced would be above industry norm. The Department determined that no additional controls and burning pipeline quality natural gas to meet a lb/hr emission limit equivalent to 1.0 g/hp-hr constitutes BACT for each of the proposed compressor engines (Section II.A of Permit #3331-00).

3. PM₁₀ and 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. HPL proposed no additional controls and burning pipeline quality natural gas as BACT for PM₁₀ and SO₂ emissions from each of the proposed 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 concurred with HPL's BACT proposal and determined that no additional controls and burning pipeline quality natural gas will constitute BACT for PM₁₀ and SO₂ emissions from each of the compressor engines.

B. 25-MMBtu/hr Hot Oil Heater

1. NO_x BACT

a. Technically feasible control options provided include:

- SCR;
- SNCR;
- Low temperature oxidation (LoTOx);
- Dry low NO_x (Staged Combustion);
- Wet control;
- Innovative catalytic systems (SCONOX and XONON); and
- Process limitations

i. SCR

SCR is a commonly used post-combustion gas treatment technique for reduction of NO and NO₂ in an exhaust stream for relatively large emitters of NO_x. The process reduces NO_x emissions by injecting ammonia into the flue gas. The ammonia acts as the reducing agent in the presence of a catalyst to form water and nitrogen. The ammonia is injected into the flue gas upstream of a catalyst with an active surface of a noble metal, a base metal oxide, or zeolite-based material. The ammonia may be supplied as anhydrous ammonia, which is vaporized and mixed with a pressurized carrier gas in a five percent concentration. A safer alternative, but less common method, is to inject an aqueous ammonia solution. The ratio of ammonia and NO_x can be varied to achieve the desired level of NO_x reduction; however, increasing the ratio to greater than 1 results in increased unreacted ammonia passing through the catalyst and into the atmosphere (ammonia slip).

The control technology works best for flue gas between 400 and 800 degrees Fahrenheit when a minimum amount of O₂ is present. Use of zeolite catalyst can extend the upper range of this window to a maximum of 1100 degrees Fahrenheit. The catalyst and catalyst housing tend to be very large and contain a large amount of surface area. The SCR system is usually operated in conjunction with wet injection and/or low NO_x combustors. Data shows that SCR operated alone allows a higher ammonia slip than does an SCR accompanied by either a wet or dry control technology. The control efficiency for an SCR is typically estimated between 60 and 90 percent.

Disposal of spent catalyst must be considered. Unlike zeolite and precious metal catalysts, base metal catalysts constitute hazardous waste.

ii. SNCR

SNCR involves the noncatalytic decomposition of NO_x in the flue gas to nitrogen and water using a reducing agent (e.g. urea or ammonia). The reactions take place at much higher temperatures than in an SCR, typically between 1600 and 2200 degrees Fahrenheit.

iii. Low Temperature Oxidation (LoTOx)

Oxygen and nitrogen are injected at about 380 degrees Fahrenheit to transform NO and NO₂ into N₂O₅ using an ozone generator and a reactor duct. N₂O₅, which is soluble, dissociates into N₂ and H₂O in a wet scrubber.

Requirements of this system include oxygen and a cooling water supply. Also, the scrubber effluent treatment needs to be provided. The estimated control efficiency of the system is between 80 and 90 percent.

iv. Dry Low NO_x (DLN) Combustion (Staged Combustion)

Dry technologies may be identified as DLN, dry low emissions (DLE), or SoLoNO_x. These technologies incorporate multiple stage combustors that may include premixing, fuel-rich zones that reduce the amount of O₂ available for NO_x production, fuel-lean zones that control NO_x production through lower combustion temperatures, or some combination of these. A quench zone may also be present to control gas temperature.

v. Wet Controls

Water or steam injection technology has been well demonstrated to suppress NO_x emissions from gas turbines, but not used as common control for process heaters. The injected fluid increases the thermal mass by dilution and thereby reduces peak temperatures in the flame zone.

NO_x reduction efficiency increases as the water-to-fuel ratio increases. For maximum efficiency, the water must be atomized and injected with homogeneous mixing throughout the combustor. This technique reduces thermal NO_x levels, but may actually increase the production of fuel NO_x. Depending on the initial NO_x levels, wet injection may reduce NO_x by 60 percent or more.

vi. Innovative Catalytic Systems (SCONOX and XONON)

Innovative catalytic technologies integrate catalytic oxidation and absorption technology. In the SCONOX process, CO and NO are catalytically oxidized to CO₂ and NO₂; the NO₂ molecules are subsequently absorbed on the treated surface of the SCONOX catalyst. Ammonia is not required. The limited emissions data for this process reflects more HAP emissions. SCONOX technology has recently been applied to combined cycle turbine generation facilities, since steam produced by a heat recovery steam generator is required in the process.

The XONON system is applicable to diffusion and lean-premix combustors. It utilizes a flameless combustion system where fuel and air react on a catalyst surface, preventing the formation of NO_x while achieving low CO and unburned hydrocarbon emission levels. The overall combustion system consists of the partial combustion of the fuel in the catalyst module followed by completion of combustion downstream of the catalyst. Initial partial combustion produces no NO_x and downstream combustion occurs in a flameless homogeneous reaction that produces almost no NO_x. The system is totally contained within the combustor and is not an add-on control device. This technology has not been fully demonstrated.

vii. Process Limitations

The amount of NO_x and other pollutants formed by the process heaters can be reduced proportionately by limiting operating hours. The use of refinery fuel gas or natural gas as the only combustion fuel helps maintain lower NO_x emissions.

viii. No Add-on Control.

b. The following technologies are considered infeasible for the hot oil heater:

- LoTOx needs a cooling water supply;
- Wet control systems are typically used in combination turbines and are not feasible on relatively small process heaters; and
- Innovative Catalytic Systems: These are technologies mainly used for combustion turbines and are not feasible on relatively small process heaters

c. Ranked NO_x Control Effectiveness

Control Technology	Percent Reduction
SCR	70-90
DLN Retrofits	80
SNCR	30-60
Process Limitations	Varies
No Add-on Control	N/A

d. Evaluate Most Effective NO_x Controls

i. SCR/SNCR

General Cost Effectiveness for NO_x control technologies SCR and SNCR were taken from the manual, *Controlling Nitrogen Oxides Under the Clean Air Act* (STAPPA/ALAPCO, July, 1994).

Technology	Total Capital Cost (\$)	Total Annual Cost (\$)	Minimum Cost Effectiveness (\$/ton Removed)
SCR	380,000	77,000	4242.00
SNCR	230,000	45,000	6450.00

For the SCR, spent catalyst disposal creates environmental concern. Many of the catalyst formulations are potentially toxic and subject to hazardous waste disposal regulations under the Resource Conservation and Recovery Act.

ii. DLN Retrofit

Technology	Total Capital Cost (\$)	Total Annual Cost (\$)	Tons Removed (ton/yr)	Cost Effectiveness (\$/ton Removed)
DLN Retrofit	41,500	66,302	7.3	9082.00

iii. Process Limitations

The hours of operation of the hot oil heater are to be 8760 hours per year.

iv. No Add-on Control

Natural gas is proposed to be the only combustion fuel for the hot oil heater.

e. Identify NO_x BACT

Control of NO_x emissions from the hot oil heater using SCR, NSCR, and DLN is cost prohibitive. The cost of mechanical draft fans and associated electrical cost are not included in the SCR cost-effectiveness. Therefore the Department agrees with HPL's proposal of good combustion practices, no add-on control, and the combustion of natural gas as BACT for NO_x for the 25-MMBtu/hr hot oil heater.

The same BACT conclusion can be made for the 10-MMBtu/hr hot oil heater. Since this is a smaller unit with a proportionate NO_x emissions rate, SCR, NSCR, or DLN would also be considered cost-prohibitive. Therefore the Department concurs with HPL's proposal of good combustion practices, no add-on control, and the combustion of natural gas as BACT for NO_x for the 10-MMBtu/hr hot oil heater.

2. CO BACT

a. Technically feasible control options provided include:

i. Regenerative Thermal Oxidizers (RTO)/Regenerative Catalytic Oxidizers (RCO)

Oxidation systems elevate the air streams to temperatures where hydrocarbons breakdown into CO₂ and H₂O. Thermal oxidizers use dwell time and temperature to complete the reaction while catalytic oxidizers allow the reaction to happen at a lower temperature but the catalyst can become poisoned or masked. Solvent laden air travels through one chamber of ceramic heat absorbing saddles or structured packing, and enters the combustion chamber. After combustion, the warm clean air travels over the second chamber, heating the ceramic packing. At measured time intervals, the process air is switched from one chamber to the next in order to effectively use the heat recovered from the ceramic packing to elevate the process air close to operating temperatures. The estimated control efficiency of the system is between 70-90 percent.

ii. No Add-on Control.

b. Technically feasible control options provided include:

Technical issues do not cause either of the control devices to be eliminated.

c. Rank CO Control Technologies

Catalytic and thermal oxidizer units are expected to have CO control efficiencies ranging from 70-90 percent. For this BACT determination each control device was assumed to have a control efficiency of 80 percent.

Control Technology	Percent Reduction
RTO/RCO	80
No Add-on Control	N/A

d. Evaluate Most Effective CO Controls

i. RTO/RCO

The catalytic and thermal oxidizer economic evaluations were conducted based on the methods outlined in EPA 452/B-02-001, *Office of Air Quality Planning and Standards Control Cost Manual*, 6th Edition (OAQPS) (September 2000).

Technology	Total Annual Cost (\$)	Tons Removed (ton/yr)	Cost Effectiveness (\$/ton Removed)
Catalytic oxidation	284,000	6.1	46,355.00
RTO	249,000	6.1	40,619.00

For the catalytic oxidizer, spent catalyst disposal creates environmental concern. Many of the catalyst formulations are potentially toxic and subject to hazardous waste disposal regulations under the Resource Conservation and Recovery Act. Catalytic oxidizers cannot be eliminated based on additional environmental impacts because they are commonly used.

ii. No Add-on Control

Natural gas is proposed to be the only combustion fuel for the hot oil heater.

e. Identify CO BACT

Control of CO emissions from the hot oil heater using RTO or catalytic oxidation is cost prohibitive. Therefore the Department agrees with HPL's proposal of good combustion practices, no add-on control, and the combustion of natural gas as BACT for CO for the 25-MMBtu/hr hot oil heater.

The same BACT conclusion can be made for the 10-MMBtu/hr hot oil heater. Since this is a smaller unit with a proportionate CO emissions rate, RTO and catalytic oxidation would also be considered cost-prohibitive. Therefore the Department concurs with HPL's proposal of good combustion practices, no add-on control, and the combustion of natural gas as BACT for CO for the 10-MMBtu/hr hot oil heater.

3. PM/PM₁₀, VOC, and SO₂ BACT

The relatively low emission rates of PM/PM₁₀, VOC, and SO₂ would make add-on control technology cost prohibitive for either the 25 or 10-MMBtu/hr hot oil heater. Therefore the Department concurs with HPL's proposal of good combustion practices and the combustion of natural gas as BACT for PM/PM₁₀, VOC, and SO₂ for the 25 and 10-MMBtu/hr hot oil heater.

C. Dehydration Unit Reboiler

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 natural gas fired dehydration unit reboilers. The dehydration unit proposed by HPL does not utilize a reboiler and the 25-MMBtu/hr hot oil heater will provide all necessary heat for the unit and all associated emissions from the dehydration unit are a product of the still vent.

D. 300 bbl Condensate Storage Tanks, Dehydration Unit Still Vent, and Fugitive VOC Emissions

The Department is not aware of any BACT determinations that have required controls for VOC emissions from condensate storage tanks, dehydration unit still vents, or fugitive VOC emissions. HPL proposed no additional controls and using best management practices as BACT for VOC emissions from the condensate storage tanks, dehydration unit still vent, and fugitive VOC emission sources. Due to the relatively small amount of VOC emissions from the proposed condensate storage tanks, dehydration unit still vent, and fugitive VOC emission sources, any add-on controls would be cost prohibitive. Therefore, the Department concurred with HPL's BACT proposal and determined that no additional controls and best management practices will constitute BACT for VOC emissions from the condensate storage tanks, dehydration unit still vent, and fugitive VOC emission sources. Best management practices would include operating the equipment as it was designed to be operated and fixing any malfunctions as soon as reasonably practicable.

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
1,478-hp Waukesha Compressor Engine Unit 1	0.48	14.28	14.28	28.56	0.04
1,478-hp Waukesha Compressor Engine Unit 2	0.48	14.28	14.28	28.56	0.04
912-hp Waukesha Compressor Engine Unit 3	0.30	8.80	8.80	17.60	0.02
185-hp Caterpillar Compressor Engine Unit 4	0.06	1.79	1.79	3.57	0.00
Dehydration Unit--Still Vent	0.00	0.00	7.27	0.00	0.00
25-MMBtu/hr Hot Oil Heater H-1	0.66	9.13	0.50	7.67	0.06
10-MMBtu/hr Hot Oil Heater H-2	0.28	3.65	0.20	3.07	0.02
300 bbl Condensate Storage Tank #1					
--Fugitive Losses	0.00	0.00	0.86	0.00	0.00
--Flashing Losses	0.00	0.00	6.70	0.00	0.00
300 bbl Condensate Storage Tank #2					
--Fugitive Losses	0.00	0.00	0.86	0.00	0.00
--Flashing Losses	0.00	0.00	6.70	0.00	0.00
Truck Loading			12.38		
Fugitive VOC Emissions					
--Inlet/Fuel Gas Stream	0.00	0.00	1.27	0.00	0.00
--Condensate Stream	0.00	0.00	0.35	0.00	0.00
Total	2.26	51.93	76.24	89.03	0.18

1,478-hp Compressor Engines (2 Engines)

Brake Horsepower: 1478 bhp
Hours of operation: 8760 hr/yr

PM₁₀ Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)
Calculations: 11.53 MMBtu/hr * 9.50E-03 lb/MMBtu = 0.11 lb/hr
0.11 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.48 ton/yr

NO_x Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: 1.00 gram/bhp-hour * 1478 bhp * 0.002205 lb/gram = 3.26 lb/hr
3.26 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 14.28 ton/yr

VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: $1.00 \text{ gram/bhp-hour} * 1478 \text{ bhp} * 0.002205 \text{ lb/gram} = 3.26 \text{ lb/hr}$
 $3.26 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 14.28 \text{ ton/yr}$

CO Emissions

Emission factor: 2.00 gram/bhp-hour (BACT Determination)
Calculations: $2.00 \text{ gram/bhp-hour} * 1478 \text{ bhp} * 0.002205 \text{ lb/gram} = 6.52 \text{ lb/hr}$
 $6.52 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 28.56 \text{ ton/yr}$

SO₂ Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)
Calculations: $11.53 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.01 \text{ lb/hr}$
 $0.01 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.04 \text{ ton/yr}$

912-hp Compressor Engines (1 Engine)

Brake Horsepower: 912 bhp
Hours of operation: 8760 hr/yr

PM₁₀ Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 7.11 MMBtu/hr (Maximum Design)
Calculations: $7.11 \text{ MMBtu/hr} * 9.50\text{E-}03 \text{ lb/MMBtu} = 0.07 \text{ lb/hr}$
 $0.07 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.30 \text{ ton/yr}$

NO_x Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: $1.00 \text{ gram/bhp-hour} * 912 \text{ bhp} * 0.002205 \text{ lb/gram} = 2.01 \text{ lb/hr}$
 $2.01 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 8.80 \text{ ton/yr}$

VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: $1.00 \text{ gram/bhp-hour} * 912 \text{ bhp} * 0.002205 \text{ lb/gram} = 2.01 \text{ lb/hr}$
 $2.01 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 8.80 \text{ ton/yr}$

CO Emissions

Emission factor: 2.00 gram/bhp-hour (BACT Determination)
Calculations: $2.00 \text{ gram/bhp-hour} * 912 \text{ bhp} * 0.002205 \text{ lb/gram} = 4.02 \text{ lb/hr}$
 $4.02 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 17.60 \text{ ton/yr}$

SO₂ Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 7.11 MMBtu/hr (Maximum Design)
Calculations: $7.11 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.004 \text{ lb/hr}$
 $0.004 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

185-hp Compressor Engines (1 Engine)

Brake Horsepower: 185 bhp
Hours of operation: 8760 hr/yr

PM₁₀ Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 1.48 MMBtu/hr (Maximum Design)
Calculations: $1.48 \text{ MMBtu/hr} * 9.50\text{E-}03 \text{ lb/MMBtu} = 0.01 \text{ lb/hr}$
 $0.01 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.06 \text{ ton/yr}$

NO_x Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: $1.00 \text{ gram/bhp-hour} * 185 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.41 \text{ lb/hr}$
 $0.41 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 1.79 \text{ ton/yr}$

VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
Calculations: 1.00 gram/bhp-hour * 185 bhp * 0.002205 lb/gram = 0.41 lb/hr
0.41 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.79 ton/yr

CO Emissions

Emission factor: 2.00 gram/bhp-hour (BACT Determination)
Calculations: 2.00 gram/bhp-hour * 185 bhp * 0.002205 lb/gram = 0.82 lb/hr
0.82 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.57 ton/yr

SO₂ Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 1.48 MMBtu/hr (Maximum Design)
Calculations: 1.48 MMBtu/hr * 5.88E-04 lb/MMBtu = 0.0009 lb/hr
0.0009 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.004 ton/yr

Dehydration Unit

Hours of operation: 8760 hr/yr

Dehydrator Still Vent

VOC Emissions

Emission Factor: 1.66 lb/hr (GRI GlyCalc, Version 4.0)
Calculations: 1.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.27 ton/yr

25-MMBtu/hr Hot Oil Heater H-1

Hours of operation: 8760 hr/yr

Fuel Heating Value: 1200 MMBtu/MMScf (Company Information)
Fuel Consumption: 25 MMBtu/hr (Maximum Design)

PM₁₀ Emissions

Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMScf * 25 MMBtu/hr / 1200 MMBtu/MMScf = 0.16 lb/hr
0.16 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.69 ton/yr

NO_x Emissions

Emission factor: 100 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 100 lb/MMScf * 25 MMBtu/hr / 1200 MMBtu/MMScf = 2.08 lb/hr
2.08 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 9.13 ton/yr

VOC Emissions

Emission Factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 5.5 lb/MMScf * 25 MMBtu/hr / 1200 MMBtu/MMScf = 0.11 lb/hr
0.11 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.50 ton/yr

CO Emissions

Emission factor: 84 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 84 lb/MMScf * 25 MMBtu/hr / 1200 MMBtu/MMScf = 1.75 lb/hr
1.75 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 7.67 ton/yr

SO_x Emissions

Emission Factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 0.6 lb/MMScf * 25 MMBtu/hr / 1200 MMBtu/MMScf = 0.01 lb/hr
0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.06 ton/yr

10-MMBtu/hr Hot Oil Heater H-2

Hours of operation: 8760 hr/yr

Fuel Heating Value: 1200 MMBtu/MMScf (Company Information)
Fuel Consumption: 10 MMBtu/hr (Maximum Design)

PM₁₀ Emissions

Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMScf * 10 MMBtu/hr / 1200 MMBtu/MMScf = 0.06 lb/hr
0.06 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.28 ton/yr

NO_x Emissions

Emission factor: 100 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 100 lb/MMScf * 10 MMBtu/hr / 1200 MMBtu/MMScf = 0.83 lb/hr
0.83 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.65 ton/yr

VOC Emissions

Emission Factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 5.5 lb/MMScf * 10 MMBtu/hr / 1200 MMBtu/MMScf = 0.05 lb/hr
0.05 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.20 ton/yr

CO Emissions

Emission factor: 84 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 84 lb/MMScf * 10 MMBtu/hr / 1200 MMBtu/MMScf = 0.70 lb/hr
0.70 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.07 ton/yr

SO_x Emissions

Emission Factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 0.6 lb/MMScf * 10 MMBtu/hr / 1200 MMBtu/MMScf = 0.005 lb/hr
0.005 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.02 ton/yr

300 bbl Condensate Storage Tanks (2 Tanks)

Hours of operation: 8760 hr/yr

VOC Emissions

Fugitive Losses

Emission Factor: 1714.34 lb/yr (EPA Tanks, Version 4.0)
Calculations: 1714.34 lb/yr * 0.0005 ton/lb = 0.86 ton/yr

Flashing Losses

Emissions: 6.70 ton/yr (Vasquez-Beggs Solution Gas/Oil Ration Correlation Method)

Truck Loading: Submerged Fill: (Dedicated Normal Service)

Formula 1 of Section 5.2 of EPA's "Compilation of Air Pollutant Emission Factors – AP-42 (1/95)"

$$L_L = 12.46^{SPM} \frac{v}{T}$$

L_L = loading loss; pounds per 1000 gallons loaded

S= saturation factor = 0.60 (Table 5-2.1)

P = true vapor pressure of liquid loaded; pounds per square inch absolute

M_v = molecular weight of vapors; pound per pound-mole (Table 7.1-2)

T = temperature of bulk liquid loaded; degrees Rankin (degrees Fahrenheit + 460)

Inputs

T = 70 degrees Fahrenheit

S= Submerged loading dedicated normal service

P = Gasoline RVP 13

$$L_L = 7.26 \text{ lb}/10^3 \text{ gal}$$

Controlled loading efficiency 90%

$$L_{Lcor} = (1-90/100) * 7.26/10^3 = 2.18 \text{ lb}/10^3 \text{ gal}$$

2,225 Bbl/day
93,450 gal/day
34,109,250 gal/yr

Total Loss = 24,759 lb/yr 12.38 ton/yr

Fugitive Emissions

VOC Emissions

Basis for Emission Factors: EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017)

Inlet/Fuel Gas Stream

Hours of operation: 8760 hr/yr
VOC Fraction: 0.4325

Valves, Relief valves, Flanges, and Connectors

Totals: 1.30 ton/yr + 1.36 ton/yr + 0.19 ton/yr + 0.09 ton/yr = 2.94 ton/yr
 2.94 ton/yr *0.4325 = 1.27 ton/yr

Condensate Stream

Hours of operation: 8760 hr/yr
VOC Fraction: 0.98

Valves, Relief valves, Flanges, and Connectors

Totals: 0.13 ton/yr + 0.17 ton/yr + 0.02 ton/yr + 0.04 ton/yr = 0.36 ton/yr
 0.36 ton/yr *0.98 = 0.35 ton/yr

V. Existing Air Quality

The facility is located in the NE¼ of the NW¼ of Section 3, Township 23 North, Range 58 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) for criteria pollutants.

VI. Ambient Air Impact Analysis

The Department determined that the impact from this permitting action will be minor. The Department believes the facility 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 a private property taking and damaging assessment and determined there are no taking or damaging implications.

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: Hiland Partners, LLC
Bakken Gathering Plant
P.O. Box 5122
Enid, Oklahoma 73702

Air Quality Permit Number: 3331-00

Preliminary Determination Issued: June 1, 2004

Department Decision Issued: June 17, 2004

Permit Final: July 3, 2004

1. *Legal Description of Site:* HPL Bakken Gathering Plant is located approximately 8 miles northwest of Sidney, Montana, in the NE¹/₄ of the NW¹/₄ of Section 3, Township 23 North, Range 58 East, in Richland County, Montana.
2. *Description of Project:* HPL proposes to construct and operate a natural gas gathering plant. The facility would consist of 4 natural gas fired compressor engines, a glycol dehydration unit, hot oil heaters, chiller, fractionator, tanks, truck loading station, and associated equipment. The facility would extract and fractionate natural gas liquids from field gas.
3. *Objectives of Project:* The proposed project would provide business and revenue for HPL by allowing the company to extract and fractionate natural gas liquids from field gas. Natural gas would be received and the gas would be dehydrated and the natural gas liquids removed for sale.
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 Montana Air Quality Permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because HPL 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 Best Available Control Technology (BACT) analysis, would be included in Permit #3331-00.
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 would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would 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 would have no discharges into surface water. 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 on water quality, quantity, and distribution 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 direct 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 soils 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.

In addition, 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 values 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 the natural gas gathering plant is a relatively small industrial facility.

The facility would also create additional noise in the area. However, any auditory aesthetic impacts would be minor because the compressor engines would be required to operate enclosed indoors and with non-Selective Catalytic Reduction (NSCR) units. NSCR units are typically designed to be installed in mufflers. 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: particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀); nitrogen oxides (NO_x); carbon monoxide (CO); volatile organic compounds (VOC), including hazardous air pollutants (HAPs); and sulfur oxides (SO_x). Air emissions from the facility would be minimized by limitations and conditions that would be included in Permit #3331-00. Conditions would include, but would not be limited to, BACT emission limits and opacity limitations on the proposed engines and the general facility. In

addition, based on previous analysis of sources of this type operating under similar conditions, the Department believes that the emissions resulting from the proposed engines exhibit good dispersion characteristics resulting in relatively low deposition impacts. While deposition of pollutants would occur as a result of operating the facility, the Department determined that the impacts from deposition of pollutants would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.), the atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions that would be placed in Permit #3331-00. The air concentration of pollutants would be relatively small, and the corresponding deposition of those air pollutants would be minor.

Since controlled 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 will 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 locating 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 Resource of Water, Air, and Energy

The proposed project would have minor impacts on the demands for the environmental resources of air, because the facility would be a source of air pollutants, and water because the facility may use water for dust suppression. 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 from deposition of pollutants 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. The impact on the demand for the non-renewable 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 near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there have not been any previously recorded historic or archaeological sites within the proposed area. In addition, SHPO records indicated that no previous cultural resource inventories have been conducted in the area. SHPO recommended that a cultural resource inventory be conducted to determine if cultural or historic sites exist and if they would be impacted. However, neither the Department nor SHPO has the authority to

require HPL to conduct a cultural resource inventory. The Department determined that due to the previous disturbance in the area (the area is an active crude oil field) and the small amount of land disturbance that would be required to construct the facility, the chance of the project impacting any cultural or historic sites would be minor.

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 little 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 #3331-00.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. 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 ECONOMIC 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 above social and economic resources in the area because the proposed project would take place in a relatively remote location. Further, the operation of a gas gathering plant of this type necessitates four 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 above social and economic resources of the area.

Additional activity (vehicle traffic, construction equipment, etc.) would be noticeable during facility construction and the gathering plant would typically require day-to-day employees 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 in the area would be minor. Overall, any impacts to the local and state tax base would be minor.

D. Agricultural or Industrial Production

The land at the proposed location is rural agriculture 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, thereby resulting in relatively minor impact to industrial production of the area.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. 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. 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, impacts on the employment and population because four permanent employees would be required for normal operations thereby resulting in relatively minor, if any, new immigration to the area. In addition, temporary construction-related positions would result from this project. However, 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 above social and economic resources in the area would be minor.

- I. Demands for Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue Permit #3331-00 and to assure compliance with applicable rules, standards, and conditions that would be contained in Permit #3331-00. 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 but the gas gathering plant typically does 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 and the day-to-day oversight of the plant by permanent employees. 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 (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. 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. Overall, any impacts to the local industrial and commercial activity of the area would be minor.

- K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans or goals. 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 #3331-00.

Additional facilities (compressor stations, gas plants, etc.) could locate in the area to withdraw natural gas from the nearby area and/or to separate the components of natural gas. 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.

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 gathering plant. Permit #3331-00 includes conditions and limitations to ensure the facility will 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 and Waste Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Chris Ames

Date: May 20, 2004