AIR QUALITY PERMIT

Issued To:	Hiland Partners, LP Midway Compressor Station P.O. Box 5122 Enid, OK 73702	Permit: #3878-00 Application Complete: 09/05/06 Preliminary Determination Issued: 09/14/06 Department's Decision Issued: 10/02/06 Permit Final: 10/18/06 AFS #: 083-0313

An air quality permit, with conditions, is hereby granted to Hiland Partners, LP (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 #3878-00 is issued to HPL for the construction and operation of the Midway Compressor Station. The facility is 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 about six miles south of Girard, Montana, in the SE¼ of Section 32, Township 24 North, Range 57 East, in Richland County.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. HPL shall not operate more than three natural gas compressor engines at any one time at the Midway Compressor Station (ARM 17.8.749).

2. The maximum combined rated design capacity of the three compression engines at the Midway Compressor Station shall not exceed 4,434 horsepower (hp) and the maximum rated design capacity of any compressor engine shall not exceed 1,478 hp (ARM 17.8.749).

3. The Midway Compressor Station shall use only 4-stroke, rich-burn compressor engines (ARM 17.8.749).

4. Each compressor engine shall be controlled with a non-selective catalytic reduction (NSCR) and air/fuel ratio (AFR) controller. The pound per hour (lb/hr) emission limits for the engines shall be determined using the following equation and pollutant specific grams per brake horsepower-hour (g/bhp-hr) emission factors (ARM 17.8.752):

<u>Equation</u>
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/bhp-hr
Carbon monoxide (CO):	1.0 g/bhp-hr
Volatile organic compounds (VOC):	1.0 g/bhp-hr

5. 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).

6. 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).

7. 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).

B. Testing Requirements

1. Each of the compressor engines equal to or less than 1,478-hp shall be initially tested for NO_x and CO, concurrently, to demonstrate compliance with the lb/hr emission limits as calculated in Section II.A.3. 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 Midway Compressor Station within 30 days after commencement of construction.

2. 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).

3. HPL shall provide the Department with written notification of the engine models utilized within 15 days after the actual start-up date(s) (ARM 17.8.749).

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 filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by 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, LP
Midway Compressor Station
Permit #3878-00

I. Introduction/Process Description

Hiland Partners, LP (HPL), is permitted for the construction and operation of the Midway Compressor Station. The facility is a natural gas compressor station located in the SE¼ of Section 32, Township 24 North, Range 57 East, in Richland County, Montana.

A. Permitted Equipment

The facility consists of the following equipment:

(3) 1,478-horsepower (hp) Compressor Engines;
(1) 0.25-million British thermal unit per hour (MMBtu/hr) triethylene glycol (TEG) dehydrator reboiler and associated still vent; and
(2) 400-barrel (bbl) condensate storage tanks.

The Midway Compressor Station consists of not more than three field compressor engines with a combined maximum rated design capacity of 4,434 horsepower (hp) and the maximum rated design capacity of each individual compressor engine shall not exceed 1,478 hp. The Midway Compressor Station shall use only 4-stroke, rich-burn compressor engines.

B. Source Description

The Midway Compressor Station compresses and transports natural gas from the nearby Bakken gas field. The 3 natural gas fired compressor engines compress the gas for transmission through the pipeline and 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 PM_{10}

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. (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 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 MMBtu 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 burn 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 Code of Federal Regulations (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 Midway 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 Midway 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. A major Hazardous Air Pollutant (HAP) source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as applicable, including the following subparts:

   - 40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.
   - 40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities.
   - 40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines.

   Based on the information submitted by HPL, the facility is not subject to the provisions of 40 CFR Part 63, 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. HPL 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 stack for HPL 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. HPL submitted the appropriate permit application fee for the current permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an 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. HPL 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. 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 August 30, 2006, 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 Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this Permit Analysis.

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

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving 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 (PM_{10}) in a serious PM_{10} 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 #3878-00 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 PM_{10} nonattainment area.

d. This facility is not subject to any current NSPS.

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

f. This source is not a Title IV affected source, or a solid waste combustion unit.

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

Based on these facts, the Department determined that HPL will be 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 #3878-00, addressing some available methods of controlling emissions from the sources to be operated at the Midway Compressor Station. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determination:

A. 1,478-hp Compressor Engines

1. NO_x BACT

As part of the NO_x BACT analysis, the following control technologies were reviewed:

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

Lean-burn and/or PCC engines are technically infeasible for the project because the Btu content of the fuel gas (1,480 Btu/Scf) is too high. HPL provided information from Waukesha 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 engine. In addition, SCR applied to rich-burn engines is technically infeasible because the oxygen concentration from rich-burn engines is not high enough for an SCR to operate properly; therefore, the Department determined that all of the control options involving SCR will not constitute BACT for the proposed compressor engines. Further, crossover engines must utilize natural gas with a Btu rating less than 1,200 Btu/Scf to operate properly. Because the Btu content of the fuel gas is above 1,200 Btu/Scf, crossover engines are 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:

Control Technology	% Control	NO_X Emission Rate (g/bhp-hr)
Rich-Burn with NSCR and AFR	~90%	1.0
Rich-Burn without Control (example: Waukesha L7042GSI – 1,547 bhp)	0%	8.5

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 (N_2), water (H_2O), and carbon dioxide (CO_2). 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. Maintaining the proper air-to-fuel ratio increases fuel efficiency, optimizes the level of reducing agents, and minimizes agents that can poison the catalyst; thus, provides for the maximum NO_x emission reduction.

As proposed by HPL, the Department determined that an NSCR unit with an AFR controller constitutes BACT for the reduction of NO_x emissions resulting from the operation of the proposed 1,478-hp natural gas compressor engines. NSCR/AFR control typically constitutes BACT for rich-burn compressor engines. NSCR/AFR control 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 these technologies operated together are capable of achieving the pound per hour BACT emission limit for NO_x, established in Section II.A of Permit #3878-00. The pound per hour limit was established as BACT by using 1.0 gram per horsepower-hour (g/hp-hr). Because the highest 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. CO BACT

As part of the CO BACT analysis, the following control technologies 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 NSCR unit and an AFR controller
- Lean-burn engine with an NSCR unit
- Lean-burn engine with an AFR controller
- Lean-burn engine with no additional controls
- PCC engine with a catalytic oxidation unit and an AFR controller
- PCC engine with a catalytic oxidation unit
- PCC with an NSCR unit and an AFR controller
- PCC with an NSCR unit
- PCC engine with an AFR controller
- PCC engine with no additional controls
- Rich-burn engine with a catalytic oxidation unit and an AFR controller
- Rich-burn engine with a catalytic oxidation unit
- 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
- Rich-burn engine with no additional controls
- Crossover engine with an oxidation catalyst
- Crossover engine with an NSCR unit
- Crossover engine with no additional controls

Lean-burn and/or PCC engines are technically infeasible for the project because the Btu content of the fuel gas (1,480 Btu/Scf) is too high. HPL provided information from Waukesha 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 all control technologies for rich-burn engines utilizing a catalytic oxidation unit are technically infeasible and will not constitute BACT for the proposed compressor engine. Further, crossover engines must utilize natural gas with a Btu rating less than 1,200 Btu/Scf to operate properly. Because the Btu content of the fuel gas is above 1,200 Btu/Scf, crossover engines are 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:

Control Technology	CO Reduction (% Control)	CO Emission Rate (g/bhp-hr)
Rich-Burn with NSCR and AFR	80 – 90%	1.0
Rich-Burn without Control (example: Waukesha L7042GSI – 1,547 bhp)	0%	32.0

Rich-Burn Engine with an NSCR unit and an AFR Controller

An NSCR unit controls CO 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 N_2, H_2O, and CO_2. The noble metal catalyst usually operates between 800°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, 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. Maintaining the proper air-to-fuel ratio increases fuel efficiency, optimizes the level of reducing agents, and minimizes agents that can poison the catalyst; thus, provides for the maximum CO emission reduction.

As proposed by HPL, the Department determined that an NSCR unit with an AFR controller constitutes BACT for the reduction of CO emissions resulting from the operation of the proposed 1,478-hp natural gas compressor engines. NSCR/AFR control typically constitutes BACT for rich-burn compressor engines. NSCR/AFR control effectively reduces NO_x 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 these technologies operated together are capable of achieving the pound per hour BACT emission limit for CO, established in Section II.A of Permit #3878-00. The pound per hour limit was established as BACT by using 1.0 grams per g/hp-hr. Because the highest 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.

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. 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 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 1,478-hp compressor engines (Section II.A of Permit #3878-00).

4. PM_{10}/SO_2 BACT

The Department is not aware of any BACT determinations that have required controls for PM_{10} or sulfur dioxide (SO_2) emissions from natural gas fired compressor engines. HPL proposed no additional controls and burning pipeline quality natural gas as BACT for PM_{10} and SO_2 emissions from each of the proposed 1,478-hp compressor engines. Due to the relatively small amount of PM_{10} and SO_2 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 PM_{10} and SO_2 emissions from each of the 1,478-hp compressor engines.

B. 0.25-MMBtu/hr Dehydration Unit Reboiler

PM_{10}, NO_x, VOC, CO, and SO_x Emissions

The Department is not aware of any BACT determinations that have required controls for PM_{10}, NO_x, VOC, CO, or SO_x emissions from natural gas fired dehydration unit reboilers. HPL proposed no additional controls and burning pipeline quality natural gas as BACT for PM_{10}, NO_x, VOC, CO, and SO_x emissions from the dehydration unit reboiler. Due to the relatively small amount of PM_{10}, NO_x, VOC, CO, and SO_x emissions from the proposed dehydration unit reboiler, 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 PM_{10}, NO_x, VOC, CO, and SO_x emissions from the 0.25 MMBtu/hr dehydration unit reboiler.

C. 400-bbl Condensate Storage Tanks, Dehydration Unit Still Vent, and Fugitive VOC Emissions

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

Tons/year					
Source	PM_{10}	NO_x	VOC	CO	SO_x
4-stroke, rich-burn compressor engine (up to 1,478 bhp)	0.48	14.28	14.28	14.28	0.04
4-stroke, rich-burn compressor engine (up to 1,478 bhp)	0.48	14.28	14.28	14.28	0.04
4-stroke, rich-burn compressor engine (up to 1,478 bhp)	0.48	14.28	14.28	14.28	0.04
Dehydration Unit					
--0.25 MMBtu/hr Reboiler	0.00	0.09	0.00	0.04	0.00
--Still Vent	0.00	0.00	9.55	0.00	0.00
400 bbl Condensate Storage Tank #1					
--Fugitive Losses	0.00	0.00	0.50	0.00	0.00
--Flashing Losses	0.00	0.00	1.00	0.00	0.00
400 bbl Condensate Storage Tank #2					
--Fugitive Losses	0.00	0.00	0.50	0.00	0.00
--Flashing Losses	0.00	0.00	1.00	0.00	0.00
Fugitive VOC Emissions					
--Inlet/Fuel Gas Stream	0.00	0.00	0.68	0.00	0.00
--Condensate Stream	0.00	0.00	0.44	0.00	0.00
Total	1.44	42.93	56.51	42.88	0.12

1,478-hp Compressor Engines (3 Engines)
Brake Horsepower: 1478 bhp
Hours of operation: 8760 hr/yr

<u>PM_{10} Emissions</u>
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

<u>NO_x Emissions</u>
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

<u>VOC Emissions</u>
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

<u>CO Emissions</u>
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

<u>SO_2 Emission</u>
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 MMBtu/hr * 5.88E-04 lb/MMBtu = 0.01 lb/hr
0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 ton/yr

Dehydration Unit
Hours of operation: 8760 hr/yr

<u>0.25 MMBtu/hour Dehydrator Reboiler</u>
Fuel Heating Value: 1480 MMBtu/MMScf (Company Information)
Fuel Consumption: 0.25 MMBtu/hr (Maximum Design)

PM_{10} Emissions
Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)
Calculations: 7.6 lb/MMScf * 1MMScf/1480MMBtu * 0.25 MMBtu/hr = 0.001 lb/hr
0.001 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

NO_x Emissions
Emission factor: 100 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 100 lb/MMScf * 1MMScf/1480MMBtu * 0.25 MMBtu/hr = 0.02 lb/hr
0.02 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.09 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 * 1MMScf/1480MMBtu * 0.25 MMBtu/hr = 0.0001 lb/hr
0.0001 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

CO Emissions
Emission factor: 84 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)
Calculations: 84 lb/MMScf * 1MMScf/1480MMBtu * 0.25 MMBtu/hr = 0.01 lb/hr
0.01 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.04 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 * 1MMScf/1480MMBtu * 0.25 MMBtu/hr = 0.0001 lb/hr
0.0001 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

Dehydrator Still Vent

VOC Emissions

Emission Factor: 2.18 lb/hr (GRI GlyCalc, Version 4.0)
Calculations: 2.18 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 9.55 ton/yr

400 bbl Condensate Storage Tanks (2 Tanks)
Hours of operation: 8760 hr/yr

VOC Emissions

Fugitive Losses

Emission Factor: 1,005.07 lb/yr (EPA Tanks, Version 4.0)
Calculations: 1,005.07 lb/yr * 0.0005 ton/lb = 0.50 ton/yr
Flashing Losses

Emissions: 1.00 ton/yr (Vasquez-Beggs Solution Gas/Oil Ration Correlation Method)

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: 14 components in gas service
Emission Factor: 4.5E-03 kg/hr/component
Calculations: 4.5E-03 kg/hr/component * 14 components * 2.20462 lb/kg = 0.1389 lb/hr
0.1389 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.6084 ton/yr

Relief Valves: 9 components in gas service
Emission Factor: 8.8E-03 kg/hr/component
Calculations: 8.8E-03 kg/hr/component * 9 components * 2.20462 lb/kg = 0.1746 lb/hr
0.1746 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.7647 ton/yr

Connectors:	21 components in gas service
Emission Factor:	2.0E-04 kg/hr/component
Calculations:	2.0E-04 kg/hr/component * 21 components * 2.20462 lb/kg = 0.0093 lb/hr 0.0093 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0407 ton/yr
Flanges:	42 components in gas service
Emission Factor:	3.9E-04 kg/hr/component
Calculations:	3.9E-04 kg/hr/component * 42 components * 2.20462 lb/kg = 0.0361 lb/hr 0.0361 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.1581 ton/yr
Totals:	0.6084 ton/yr + 0.7647 ton/yr + 0.0407 ton/yr + 0.1581 ton/yr = 1.5719 ton/yr 1.5719 ton/yr *0.4325 = 0.6798 ton/yr

Condensate Stream

Hours of operation:	8760 hr/yr
VOC Fraction:	0.98
Valves:	5 components in gas service
Emission Factor:	4.5E-03 kg/hr/component
Calculations:	4.5E-03 kg/hr/component * 5 components * 2.20462 lb/kg = 0.0496 lb/hr 0.0496 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.2172 ton/yr
Relief Valves:	2 components in gas service
Emission Factor:	8.8E-03 kg/hr/component
Calculations:	8.8E-03 kg/hr/component * 2 components * 2.20462 lb/kg = 0.0388 lb/hr 0.0388 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.1699 ton/yr
Connectors:	10 components in gas service
Emission Factor:	2.0E-04 kg/hr/component
Calculations:	2.0E-04 kg/hr/component * 10 components * 2.20462 lb/kg = 0.0044 lb/hr 0.0044 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0193 ton/yr
Flanges:	10 components in gas service
Emission Factor:	3.9E-04 kg/hr/component
Calculations:	3.9E-04 kg/hr/component * 10 components * 2.20462 lb/kg = 0.0086 lb/hr 0.0086 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.0377 ton/yr
Totals:	0.2172 ton/yr + 0.1699 ton/yr + 0.0193 ton/yr + 0.0377 ton/yr = 0.4441 ton/yr 0.4441 ton/yr *0.98 = 0.4352 ton/yr

V. Existing Air Quality

The facility is located in the SE¼ of Section 32, Township 24 North, Range 57 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

Because controlled emissions from this permitting action 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.

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, MT 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Hiland Partners, LP
Midway Compressor Station
P.O. Box 5122
Enid, OK 73702

Air Quality Permit Number: 3878-00

Preliminary Determination Issued: September 14, 2006
Department Decision Issued: October 2, 2006
Permit Final: October 18, 2006

1. *Legal Description of Site*: HPL's Midway Compressor Station is located approximately six miles south of Girard, Montana, in the SE¼ of Section 32, Township 24 North, Range 57 East, in Richland County.

2. *Description of Project*: HPL proposes to construct and operate a natural gas compressor station. The facility would consist of not more than three field compressor engines with a combined maximum rated design capacity of 4,434 hp and the maximum rated design capacity of each individual compressor engine shall not exceed 1,478 hp. The Midway Compressor Station shall use only 4-stroke, rich-burn compressor engines. In addition, the facility consists of a glycol dehydration unit, condensate storage tanks, and associated equipment. The facility would receive natural gas from the nearby Bakken Gas Field and dehydrate and compress the natural gas for transmission through the pipeline.

3. *Objectives of Project*: The proposed project would provide business and revenue for HPL by allowing the company to gather and sell natural gas. Natural gas would be received from the nearby Bakken Gas Field and the gas would be dehydrated and 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 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 BACT analysis, would be included in Permit #3878-00.

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 would have no discharges into surface or ground 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 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 or ground water would occur and no use of 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.

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 natural gas compressor stations are relatively small industrial facilities.

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 be operated with NSCR units and 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: PM_{10}; 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 #3878-00. 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 and would result in lower deposition impacts to the affected area. While deposition of pollutants would occur as a result of operating the facility, the Department determined that any air quality 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 #3878-00.

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 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 Resource 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 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 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. The Department determined that due to 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 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 #3878-00.

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 social structures and mores or the cultural uniqueness and diversity in 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 or the cultural uniqueness and diversity of 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 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; but 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. 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.

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 or the distribution of population 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 or the distribution of population 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 #3878-00 and to assure compliance with applicable rules, standards, and conditions that would be contained in Permit #3878-00. 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 (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 and only minor, if any, impacts would be expected.

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 #3878-00.

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 Environmental Impact Statement (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 #3878-00 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 Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

EA prepared by: Eric Thunstrom
Date: September 5, 2006