Montana Department of
ENVIRONMENTAL QUALITY
Brian Schweitzer, Governor
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March 12, 2009

Todd Senescall, Environmental Associate
WBI Holdings, Inc.
P.O. Box 131
Glendive, MT 59330

Dear Mr. Senescall:

Air Quality Permit #4282-00 is deemed final as of March 12, 2009, by the Department of Environmental Quality (Department). This permit is for a natural gas compressor station. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Skye Hatten, P.E.
Environmental Engineer
Air Resources Management Bureau
(406) 444-5287

VW:sh
Enclosure

AIR QUALITY PERMIT

Issued To:	Williston Basin Interstate Pipeline Company Willow Creek Compressor Station P.O. Box 131 Glendive, MT 59330	Permit: #4282-00 Application Complete: 12/15/08 Preliminary Determination Issued: 1/23/09 Department's Decision Issued: 2/24/09 Permit Final: 3/12/09 AFS: #011-0002

An air quality permit, with conditions, is hereby granted to Williston Basin Interstate Pipeline Company – Willow Creek Compressor Station (WBIP), 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 #4282-00 is issued to WBIP for the construction and operation of the Willow Creek 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 approximately 14 miles northwest of Alzada, Montana. The legal description of the facility is the SW ¼ of the NW ¼ of Section 11, Township 8 South, Range 57 East, Carter County, Montana.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. WBIP shall not operate more than two lean-burn compressor engines at any given time and the engines shall each have a maximum rated design capacity equal to, or less than, 3,550 hp (ARM 17.8.749).

2. Emissions from each of the lean-burn engines shall be controlled with an oxidation catalyst. The pound per hour (lb/hr) emission limits for the engines shall be determined using the following equation and pollutant specific gram 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/gram

<u>Emission Factors</u>

Oxides of Nitrogen (NO_X):	0.7 g/bhp-hr
Carbon Monoxide (CO):	0.2 g/bhp-hr
Volatile Organic Compounds (VOC):	0.22 g/bhp-hr

3. WBIP shall operate all equipment to provide the maximum air pollution control for which it was designed (ARM 17.8.752).

4. WBIP 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).

5. WBIP 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).

6. WBIP 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.5 (ARM 17.8.749).

7. WBIP shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable natural gas engine (ARM 17.8.340 and 40 CFR 60, Subpart JJJJ and ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. The lean-burn compressor engines shall be initially tested for NO_X, VOC and CO, concurrently, to demonstrate compliance with the emission limits in Section II.A.4, within 180 days of the initial start up date of the compressor engines. Further testing shall continue on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department or as required by 40 CFR 60, Subpart JJJJ or 40 CFR 63, Subpart ZZZZ (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. WBIP 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. WBIP shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit,*** change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be

submitted to the Department, in writing, 10 days prior to 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 WBIP as a permanent business record for at least five 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. WBI shall provide the Department with written notification of construction, including purchase and installation of compressor engines within 30 days after commencement of construction (ARM 17.8.749).

2. WBIP shall provide the Department with written notification of the actual start-up date(s) of the compressor engine(s) within 15 days after the actual start-up date(s) (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – WBIP 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 WBIP fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving WBIP 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 WBIP may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

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

Permit Analysis
Williston Basin Interstate Pipeline Company
Willow Creek Compressor Station
Permit #4282-00

I. Introduction/Process Description

Williston Basin Interstate Pipeline Company (WBIP) is permitted for the construction and operation of the Willow Creek Compressor Station. The facility is a natural gas compressor station located approximately 14 miles northwest of Alzada, Montana. The legal description of the facility is the SW ¼ of the NW ¼ of Section 11, Township 8 South, Range 57 East, Carter County, Montana.

A. Permitted Equipment

WBIP is permitted to operate no more than two lean-burn natural gas compressor engines having a maximum rated design capacity equal to, or less than 3,550 horsepower (hp) with an oxidation catalyst.

B. Source Description

The natural gas compressor engines at the Willow Creek Compressor Station will be used to compress and transmit natural gas from local field wells.

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).

   WBIP 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}

WBIP 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 six 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, WBIP shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. WBIP will burn natural gas in all 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) Part 60, Standards of Performance for New Stationary Sources (NSPS).

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

   b. 40 CFR 60, Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The Willow Creek Compressor Station is subject to 40 CFR 60, Subpart JJJJ, which applies to any stationary spark ignition (SI) internal combustion engine (ICE) that commence construction, modification, or reconstruction after June 12, 2006, where the stationary ICE is manufactured after July 1, 2007, for engines greater than 500 hp, or after January 1, 2008, for engines less than 500 hp.

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

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

   b. 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 standards and provisions of 40 CFR 63, Subpart HH. The Willow Creek Compressor Station is not a NESHAP-affected source under this Subpart because the facility does not include an affected emission point as defined in 63.760(b)(1) or 63.760(b)(2).

   c. 40 CFR Part 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. In order for a natural gas transmission and storage facility to be subject to 40 CFR 63, Subpart HHH requirements, the facility must be a major source of Hazardous Air Pollutants (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 63, Subpart HHH. The Willow Creek Compressor Station is not subject to the provisions of 40 CFR 63, Subpart HHH, because the facility is not a major source of HAPs.

   d. 40 CFR 63, Subpart ZZZZ — National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. As an area source, the two lean burn Reciprocating Internal Combustion Engines (RICE) at the Willow Creek Compressor Station will be subject to the area source provisions of this rule since two engines were manufactured after June 12, 2006.

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. WBIP 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 modified stack for WBIP 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. WBIP 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 modification to construct, modify, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. WBIP has the PTE greater than 25 tons per year of NO_X; therefore, a permit is required.

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

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the 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, modification, or use of a source. WBIP 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. WBIP submitted an affidavit of publication of public notice for the December 4, 2008, issue of *The Billings Gazette*, a newspaper of general circulation in the City of Billings in Yellowstone County, as proof of compliance with the public notice requirements.

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

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

8. ARM 17.8.755 Inspection of Permit. This rule requires that 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 WBIP 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 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.

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

13. 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).

14. 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.

15. 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 require that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #4282-00 for WBIP, 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 and 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 subject to a current NSPS (40 CFR 60, Subpart JJJJ).

e. This facility is subject to area source provisions of a current NESHAP standards (40 CFR 63, Subpart ZZZZ).

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 WBIP would be a minor source of emissions as defined under Title V. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit, WBIP will be required to obtain a Title V Operating Permit.

III. BACT Determination

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

A BACT analysis was submitted by WBIP in Permit Application #4282-00, addressing the available methods of controlling emissions from the sources used at the Signal Butte Compressor Station. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determinations.

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.

A. NO_x BACT

As part of the NO_X BACT analyses, the following control technologies were reviewed:

- Lean-burn engine with oxidation catalyst
- 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 an AFR controller
- Lean-burn engine with an SCR unit and an AFR controller
- 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 no additional controls
- Rich-burn engine with oxidation catalyst
- 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 an SCR and an AFR controller
- Rich-burn engine with an SCR
- Rich-burn engine with no additional controls

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. NSCR on lean-burn engines is technically infeasible because the engine must burn a rich fuel mixture for the NSCR to properly operate. Adverse environmental impacts could occur with an SCR unit operating on lean-burn engines at variable loads as required by a typical compressor engine. SCR units are typically installed on process units that have a constant or low variability in load

fluctuation. When engine load changes, excess ammonia (ammonia slip) may pass through the system and out the stack or not enough ammonia will be injected. The addition of an SCR on a lean-burn engine is an expensive NO_X control strategy. The annual operating costs of SCR are significantly affected by the size of the engine and in this case, make this option economically infeasible.

As proposed by WBI, the Department determined that an oxidation catalyst controller constitutes BACT for the reduction of NO_x emissions resulting from the operation of the proposed natural gas compressor engine. Oxidation catalyst controls effectively reduce 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 an oxidation catalyst is capable of achieving the BACT emission limit for NO_x. Because the highest technically feasible control option was determined to be BACT and this determination is consistent with other recently permitted similar sources, the remaining technically feasible control options do not need to be further reviewed.

The BACT limit will be 0.7 grams per brake horsepower-hour (g/bhp-hr) for NO_x. This limit is based on manufacturer specifications and is comparable to other recently permitted sources.

B. CO BACT

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

- Lean-burn engine with oxidation catalyst
- Lean-burn engine with an AFR controller
- 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 no additional controls
- Rich-burn engine with oxidation catalyst
- 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

Catalytic oxidation applied to a rich-burn engine is technically infeasible because the oxygen concentration from a rich-burn engine is not high enough for a catalytic oxidizer to operate properly. An NSCR unit applied to a lean-burn engine or lean-burn retrofit engine is also technically infeasible because the NSCR unit needs a rich fuel-to-air ratio to operate effectively.

As proposed by WBI, the Department determined that an oxidation catalyst controller constitutes BACT for the reduction of CO emissions resulting from the operation of the proposed natural gas compressor engine. Oxidation catalyst controls effectively reduce CO emissions and represents a technically, economically, and environmentally feasible option for the control of CO emissions resulting from internal combustion engines such as those proposed for the current permit action. Further, it has been demonstrated that an oxidation catalyst is capable of achieving the BACT emission limit for CO. Because the highest technically feasible control option was determined to be BACT and this determination is consistent with other recently permitted similar sources, the remaining technically feasible control options do not need to be further reviewed.

The BACT limit will be 0.2 g/bhp-hr for CO. This limit is based on manufacturer specifications and is comparable to other recently permitted sources.

C. VOC BACT

The Department is not aware of any BACT determinations that have required controls for Volatile Organic Compound (VOC) emissions from compressor engines. Due to the relatively small amount of VOC emissions from the proposed compressor engine, any add-on controls would be cost prohibitive. WBI did not propose any additional controls for VOC. The Department determined that no additional controls and best management practices will constitute BACT for VOC emissions. 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 BACT limit will be 0.22 g/bhp-hr for VOC. This limit is based on manufacturer specifications and is comparable to other recently permitted sources.

D. PM_{10} and 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. WBIP proposed no additional controls and burning pipeline quality natural gas as BACT for PM_{10} and SO_2 emissions from the proposed compressor engine. Due to the relatively small amount of PM_{10} and SO_2 emissions from the proposed engine and the cost of adding additional control, any add-on controls would be cost prohibitive. Therefore, the Department concurred with WBIP's BACT proposal and determined that no additional controls.

IV. Emission Inventory

Ton/year					
Source	PM_{10}	NO_X	VOC	CO	SO_2
3,550-hp Engine	8.11E-03	24.00	7.543	6.857	6.18E-02
3,550-hp Engine	8.11E-03	24.00	7.543	6.857	6.18E-02
Total	**0.016**	**48.00**	**15.09**	**13.71**	**0.124**

3,550-hp Lean-Burn Compressor Engines (2 Engines)
Brake Horsepower: 3,550 bhp
Hours of operation: 8,760 hr/yr

<u>PM_{10} Emissions</u>
Emission Factor: 7.71E-05 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
Fuel Consumption: 24.0 MMBtu/hr (Maximum Design)
Calculations: 24.0 MMBtu/hr * 7.71E-05 lb/MMBtu = 1.85E-03 lb/hr
1.85E-03 lb/hr * 8,760 hr/hr * 0.0005 ton/lb = 8.11E-03 ton/yr
8.11E-03 ton/yr * 2 engines = 0.016 ton/yr

<u>SO_2 Emission</u>
Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
Fuel Consumption: 24.0 MMBtu/hr (Maximum Design)
Calculations: 24.0 MMBtu/hr * 5.88E-04 lb/MMBtu = 1.41E-02 lb/hr
1.41E-02 lb/hr * 8,760 hr/hr * 0.0005 ton/lb = 6.18E-02 ton/yr
8.11E-03 ton/yr * 2 engines = 0.124 ton/yr

<u>NO_X Emissions</u>
Emission factor: 0.7 gram/bhp-hour (BACT Determination)
Calculations: 0.7 gram/bhp-hour * 3,550 bhp * 0.002205 lb/gram = 5.479 lb/hr
5.479 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 24.00 ton/yr
24.00 ton/yr * 2 engines = 48.00 ton/yr

VOC Emissions

Emission factor: 0.22 gram/bhp-hour (BACT Determination)

Calculations: 0.22 gram/bhp-hour * 3,550 bhp * 0.002205 lb/gram = 1.722 lb/hr
1.722 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 7.543 ton/yr
7.543 ton/yr * 2 engines = 15.09 ton/yr

CO Emissions

Emission factor: 0.2 gram/bhp-hour (BACT Determination)

Calculations: 0.2 gram/bhp-hour * 3,550 bhp * 0.002205 lb/gram = 1.566 lb/hr
1.566 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 6.857 ton/yr
6.857 ton/yr * 2 engines = 13.71 ton/yr

HCOH Emissions

Emission factor: 0.1 gram/bhp-hour

Calculations: 0.1 gram/bhp-hour * 3,550 bhp * 0.002205 lb/gram = 0.783 lb/hr
0.783 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 3.429 ton/yr
3.429 ton/yr * 2 engines = 6.860 ton/yr

V. Existing Air Quality

The WBIP Willow Creek Compressor Station is located 14 miles northwest of Alzada, Montana, in the SW ¼ of the NW ¼ of Section 11, Township 8 South, Range 57 East, Carter County, Montana. Carter County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

VI. Ambient Air Impact Analysis

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

VII. Ambient Air Impact Analysis

The Department determined, based on ambient air quality modeling, that the impact from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any applicable ambient air quality standards.

Aspen Consulting & Engineering (Aspen) conducted air quality modeling for the proposed WBIP Willow Creek Compressor Station as part of the WBIP air quality permit application. The modeling was done for NO_2 and CO to demonstrate compliance with the Montana Ambient Air Quality Standards (MAAQS) and the NAAQS. In addition, although a New Source Review (NSR) - Prevention of Significant Deterioration (PSD) increment analysis was not required for this permitting action, the Department requested that permittees of natural gas compressor stations model for PSD increments for NO_2; therefore, a Class II PSD increment analysis was conducted.

EPA's AERMOD model was used with 5 years of meteorological data from the Sheridan, Wyoming (station #24029) and Rapid City, South Dakota (station #24090) meteorological (met) stations. Sheridan, Wyoming met data from 1986 through 1990 was used in AERMET as the surface data. Upper air data from the Rapid City, South Dakota station for the same time period was also used in AERMET. Modeled receptor elevations were derived from digital elevation model (DEM) files from the United States Geological Survey (USGS) 7.5-minute series (1:24,000 scale) topographical maps. Aspen provided the DEM files used in AERMAP to establish receptor, building and source elevations.

The modeling receptor grid complies with the Department's modeling guidance. Fifteen receptors were placed along the fence line at no more than 50-meter (m) intervals. A Cartesian receptor grid of 2,837 receptors was developed outside the fence line boundary. Receptors were placed at 100-m spacing for a distance of 1 km from the fence line. For a distance of 1 km to 3 km from the fence

line, receptors were located at 250-m spacing. From distances of 3 km to 10 km from the source, receptors were placed at 500-m intervals. All receptor locations were expressed using the Universal Transverse Mercator (UTM) coordinates, Zone 13. The datum was North American Datum 1983 (NAD83).

Downwash effects were modeled using EPA-developed Building Profile Input Program – Plume Rise Model Enhancement (BPIP-Prime) algorithm within the AERMOD model. In a plot plan, the permit application and model input files documented the expected building corner coordinates and peak roof heights of two buildings: compressor and auxiliary. An additional five structures (scrubber, two gas coolers, and two auxiliary coolers) were shown on the permit application facility plot plan. For accuracy, the MDEQ remodeled using all of the buildings.

Modeling was conducted for both CO and NO_x emissions from the Willow Creek Compressor Station. No Montana or Wyoming sources were identified within 15 km of the proposed site so no other sources were included in the modeling analysis.

Tables 1 and 2 identify the modeling parameters used in the analysis

Table 1. WCGS Building Information.

Building ID	Description	UTM NAD83 Zone 13[1] SW Corner (mE)[2]	SW Corner (mN)[3]	Elevation (m)[4]	Peak Height (m)	Length (m)	Width (m)
BLDG1	Compressor Building	522,970	5,000,160	1,105.6	8.23	27.4	18.3
BLDG2	Auxiliary Building	522,949	5,000,113	1,103.9	4.88	18.4	12.3
SCRUB	Scrubber Building	522,938	5,000,139	1,104.4	4.88	7.3	7.3
GAS1	Gas Cooler 1	522,958[5]	5,000,159[5]	1,104.7	3.3	12.0[5]	4.0[5]
GAS2	Gas Cooler 2	522,971[5]	5,000,187[5]	1,105.6	3.3	12.0[5]	4.0[5]
AUX1	Auxiliary 1	522,996[5]	5,000,165[5]	1,104.9	3.7	9.0[5]	3.0[5]
AUX2	Auxiliary 2	522,990[5]	5,000,151[5]	1,104.5	3.7	9.0[5]	3.0[5]

1. UTM NAD83 = Universal Transverse Mercator North American Datum 1983.
2. mE = meters Easting.
3. mN = meters Northing.
4. m = meters.
5. The MDEQ estimated this parameter using the facility plot plan and a ruler.

Table 2. WCGS Turbine Stack Parameters.

Source	UTM NAD83 Zone 13[1] (mE)[2]	(mN)[3]	Elevation (m)[4]	Stack Height (m)	Stack Inside Diameter (m)	Stack Gas Exit Temperature (K)[5]	Stack Gas Exit Velocity (m/s)[6]	NOx Emission Rate (g/s)[7]	CO Emission Rate (g/s)
Unit #1	522,979	5,000185	1,105	12.34	0.76	732	24.7	0.069	0.173
Unit #2	522,969	5,000,163	1,105	12.34	0.76	732	24.7	0.069	0.173

1. UTM NAD83 = Universal Transverse Mercator North American Datum 1983.
2. mE = meters Easting.
3. mN = meters Northing.
4. m = meters.
5. K = degrees Kelvin.
6. m/s = meters per second.
7. g/s = grams per second.

Table 3 shows the air dispersion modeling results for the 1-hour and 8-hour CO concentrations; the second highest (H2H) modeled concentrations were selected for comparison to the federal and state CO standards. The default Department CO background concentrations were added for comparison to the standards.

Table 3. Ambient Air Dispersion Results for CO

Averaging Period	NAAQS/ MAAQS (µg/m³)[1]	CO Modeled Concentration (µg/m³)	CO Background Concentration (µg/m³)	Final CO Concentration (µg/m³)	Date (MO,DAY,HR)	UTM NAD83[2] Zone 13		Elevation (m)[5]
						(mE)[3]	(mN)[4]	
1986								
1-Hour	40,000/ 26,450	**25.73**	1,725	1,751	112401	523,047	5,000,240	1,106
8-Hour	10,000	19.05	1,150	1,169	041916	523,037	5,000,104	1,104
1987								
1-Hour	40,000/ 26,450	25.05	1,725	1,750	061723	523,072	5,000,182	1,105
8-Hour	10,000	19.12	1,150	1,169	110716	523,037	5,000,104	1,104
1988								
1-Hour	40,000/ 26,450	25.18	1,725	1,750	091624	523,072	5,000,182	1,105
8-Hour	10,000	18.45	1,150	1,168	050816	523,037	5,000,104	1,104
1989								
1-Hour	40,000/ 26,450	25.29	1,725	1,750	021615	523,072	5,000,182	1,105
8-Hour	10,000	**19.64**	1,150	1,170	022016	523,072	5,000,182	1,105
1990								
1-Hour	40,000/ 26,450	25.61	1,725	1,751	100506	523,047	5,000,240	1,106
8-Hour	10,000	18.42	1,150	1,168	051516	523,037	5,000,104	1,104

1. µg/m³ = micrograms per cubic meter.
2. UTM = Universal Transverse Mercator North American Datum 1983; mE = meters Easting.
3. mE = meters Easting.
4. mN = meters Northing.
5. m = meter.

Table 4 shows the air dispersion modeling results for NO_2. The high-second-high (H2H) modeled 1-hour NO_x concentrations were converted to NO_2 using the Ozone Limiting Method (OLM) for comparison to the 1-hour NO_2 MAAQS. The Ambient Ratio Method (ARM) was used by multiplying the highest (H1H) modeled annual NO_x concentrations by a default 0.75 in order to compare the results to the annual NO_2 NAAQS/MAAQS; the applicable default Department NO_2 background concentrations were added for comparison to the relevant NAAQS/MAAQS. To determine the amount of the annual Class II PSD NO_2 increment consumed, no background concentration was added.

Table 4. Ambient Air Dispersion Model Results for NO_2

Averaging Period	NAAQS/ MAAQS (µg/m³)[1]	Class II PSD NO_2 Increment (µg/m³)	NO_x Modeled Concentration (µg/m³)	ARM/OLM[2] Adjusted to NO_2 Concentration (µg/m³)	NO_2 Background Concentration (µg/m³)	Final NO_2 Concentration (µg/m³)	Date (MO,DAY,HR)	UTM NAD83[3] Zone 13 (mE)[4]	UTM NAD83[3] Zone 13 (mN)[5]	Elevation (m)[6]
1986										
1-Hour (H2H)[7]	564	---	**103**	103	75	178	112401	523,047	5,000,240	1,006
Annual (H1H)[8]	100/94	25	8.78	6.59	6	13	---	523,037	5,000,104	1,104
1987										
1-Hour (H2H)	564	---	100	100	75	175	061723	523,072	5,000,182	1,105
Annual (H1H)	100/94	25	7.97	5.98	6	12	---	523,037	5,000,104	1,104
1988										
1-Hour (H2H)	564	---	101	101	75	176	091624	523,072	5,000,182	1,105
Annual (H1H)	100/94	25	**9.04**	6.78	6	13	---	523,037	5,000,104	1,104
1989										
1-Hour (H2H)	564	---	101	101	75	176	021615	523,072	5,000,182	1,105
Annual (H1H)	100/94	25	6.97	5.23	6	11	---	523,037	5,000,104	1,104
1990										
1-Hour (H2H)	564	---	103	103	75	178	100506	523,047	5,000,240	1,106
Annual (H1H)	100/94	25	7.17	5.38	6	11	---	523,037	5,000,104	1,104

1. µg/m³ = micrograms per cubic meter.
2. ARM/OLM = Ambient Ratio Method/Ozone Limiting Method.
3. UTM = Universal Transverse Mercator North American Datum 1983.
4. mE = meters Easting.
5. mN = meters Northing.
6. m = meter.
7. H2H = high second high.
8. H1H = highest.

As shown in Table 3, the modeled concentrations from the Willow Creek Compressor Station were about 4% and 7% of the 1-hour CO NAAQS and MAAQS, respectively. As shown in Table 4, the highest 1-hour NO_2 concentration was 178 $\mu g/m^3$, which is about 32% of the 1-hour NO_2 MAAQS. The annual NO_2 concentrations were between 11% and 14% of the corresponding NO_2 NAAQS/MAAQS. The annual Class II PSD NO_2 increment was consumed between 20% and 28%.

The H2H modeled 1-hour NO_x and CO concentrations occurred either on the north or east fence line whereas the highest annual NO_x concentrations consistently occurred on the east fence line. The H2H 8-hour CO concentrations also occurred predominately on the east fence line.

After conversion to NO_2, the NO_x emissions from the Willow Creek Compressor Station will not violate any relevant NAAQS/MAAQS or significantly consume the Class II PSD NO_2 increment. The CO emissions will also not violate the applicable CO Montana or federal air quality standards.

The proposed site will not be located within 50 km of a Class I area so no Class I analysis was performed.

VIII. Taking or Damaging Implication Analysis

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

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

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

IX. Environmental Assessment

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: Williston Basin Interstate Pipeline Company
Willow Creek Compressor Station
P.O. Box 131
Glendive, MT 59330

Air Quality Permit number: 4282-00

Preliminary Determination Issued: January 23, 2009
Department Decision Issued: February 24, 2009
Permit Final: March 12, 2009

1. *Legal Description of Site*: The WBIP – Willow Creek Compressor Station is located in Carter County, Montana, approximately 14 miles northwest of Alzada, Montana. The legal description is the SW ¼ of the NW ¼ of Section 11, Township 8 South, Range 57 East, Carter County, Montana.

2. *Description of Project*: WBIP proposes to construct and operate two lean-burn natural gas compressor engines having a maximum rated design capacity up to 3,550 hp with an oxidation catalyst for the compression and transportation of natural gas from local field wells.

3. *Objectives of Project*: The proposed project would provide business and revenue for WBIP by facilitating the gathering and selling of natural gas from the nearby gas field. Natural gas would be received and the WBIP – Willow Creek Compressor Station would compress the gas for transmission through a natural gas 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 Montana Air Quality Permit to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because WBIP 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 #4282-00.

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 NO_x, CO, VOC, HAPs, PM_{10}, and SO_2 emissions would be expected in this project area, but the emissions would have only a minor impact on existing terrestrial, aquatic life, and habitats of the area. The proposed project is located in a remote area where the land use is agricultural-grazing. The Department has determined that any impacts from emissions or deposition of pollutants would be minor due to dispersion characteristics of the pollutants, the atmosphere, and the conditions that would be placed in MAQP #4282-00.

B. Water Quality, Quantity, and Distribution

This permitting action would have little or no effect on the water quality, water quantity, and distribution, as there would be no discharge to groundwater or surface water associated with this project. The proposed project would not require surface or groundwater use and there would be no change in drainage patterns. However, minor amounts of water may be required to control fugitive dust emissions from the access roads and the general facility property. In addition, there could be minor pollutant deposition on surface waters near the project area. Therefore, the project would have minor, if any, impacts to water quality, quantity or distribution in the area.

C. Geology and Soil Quality, Stability, and Moisture

This permitting action would have a minor effect on geology and soil properties with the total land disturbance being very minimal. Some minor disturbance on up to 7.25 acres would occur during construction of the compressor station, but after construction, the only disturbance would be for occasional maintenance and general operation of the compressor engine. NO_x, CO, VOC, HAPs, PM_{10}, and SO_2 emissions from this project may have a minor effect on the soil quality; however, the air quality permit associated with this project would contain limitations and conditions to minimize the effect of the emissions on the surrounding environment. The Department determined that any impacts from deposition would be minor due to dispersion characteristics of pollutants, the atmosphere, and conditions that would be placed in MAQP #4282-00 (see section 7.F of this EA).

D. Vegetation Cover, Quantity, and Quality

The proposed project would have minor effects on the surrounding vegetation because construction on up to 7.25 acres would be required to install the engines. Other than the area encompassed by the compressor station, no additional vegetation at the site would be disturbed for the project. The NO_x, CO, VOC, HAPs, PM_{10}, and SO_2 emissions in the area from this project may have a minor effect on the surrounding vegetation; however, the air quality permit associated with this project would contain limitations to minimize the effect of the emissions on the surrounding environment. Overall, this project would have minor effects on the vegetation cover, quantity and quality.

E. Aesthetics

Construction of the compressor station will have minor impacts on the surrounding property from both the visual perspective, as well as noise pollution. However, most of the disturbance will be temporary, and once construction is complete, the natural landscaping and aesthetic value of the property will be restored. With the exception of some minimal noise from the operation of the compressor engines and the associated buildings, the Department determined only minor changes in the aesthetic value of the site will be experienced.

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: NO_x; CO; VOC, including HAPs; and very minor amounts of PM_{10} and sulfur oxides (SO_x). Air emissions from the engine would be minimized by limitations and conditions that would be included in Permit #4282-00. Conditions would include, but would not be limited to, BACT emission limits and opacity limitations on the proposed engine 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 #4282-00. The air concentration of pollutants would be relatively small, and the corresponding deposition of those air pollutants 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). In this case, the area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. Search results concluded that the Greater Sage-Grouse would be a probable habitat at the project area. The species is designated as sensitive by the U.S. Forest Service and the U.S. Bureau of Land Management. Because minor emissions and minimal disturbance of the property and surroundings are anticipated, the Department has determined that there will be a minor disturbance (if any) to unique, endangered, fragile, or limited environmental resources in the area.

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 compressor engines would be a source of air pollutants. Deposition of pollutants would occur as a result of operating the facility; however, as explained in Section 7.F of this EA, the Department determined that any impacts on air and water resources from the pollutants (including deposition) 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.

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 located near the proposed project area, the Department contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there has been one previously recorded site within the project vicinity. Site 24CT0277 is a lithic scatter located in the NW ¼ of Section 11. However, SHPO stated that based on previous inventories in the area, there is a low likelihood cultural properties will be impacted. Therefore, the Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor.

J. Cumulative and Secondary Impacts

The proposed project would cause minor effects on the physical and biological aspects of the human environment because the project would cause a slight increase in emissions of NO_x, CO, VOC, HAPs, PM_{10}, and SO_2 in the proposed area. However, conditions placed in MAQP #4282-00 to ensure that only minor air quality impacts would occur. Limitations would be established in the permit to minimize air pollution. Overall, any impacts to the physical and biological environment would be minor.

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 facilities 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

The proposed project would not cause disruption to any native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project is located in a remote area. The proposed project would not change the predominant use of the surrounding area and the facility would be relatively small by industrial standards.

B. Cultural Uniqueness and Diversity

The cultural uniqueness and diversity of the area would remain unchanged from the proposed project (no impact) because the project would take place in a remote location, where the footprint of the project will be minor, and predominant use of the area would remain the same. Operation of the compressor station would require employment of one or two employees, which is not likely to cause a significant immigration of new people to the area for employment purposes. In addition, based on previous cultural resource inventories in the area, SHPO stated that there is a low likelihood cultural properties will be impacted. Therefore, the cultural uniqueness and diversity of the area would not likely be affected.

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 as a result of the proposed project. However, the proposed project would necessitate negligible construction activities 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 and tax revenue would be minor.

D. Agricultural or Industrial Production

The land at the proposed location would be considered rural agricultural grazing land. The proposed project would result in minor impacts to industrial production because the proposed project would be a new industrial source. However, because the facility would be relatively small by industrial standards, only minor impacts to industrial production would be expected.

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

The proposed project would have minor impacts on the quantity and distribution of employment as one to two employees would be hired as a result of the proposed project. Additionally, temporary construction-related positions could result from this project. Any impacts to the quantity and distribution of employment would be minor due to the relatively small size of the facility.

H. Distribution of Population

The proposed project would have minor impacts on the employment and population of the area as one to two employees would be required for normal operations. Additionally, 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 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 #4282-00 and, in the future, to assure compliance with applicable rules, standards, and conditions that would be contained in Permit #4282-00. 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 not aware of any locally adopted environmental plans and goals affected by issuing MAQP #4282-00. This permit would contain limits for protecting air quality and keeping facility emissions in compliance with any applicable ambient air quality standards. Because the project is small, any impacts from the facility would be minor.

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 #4282-00.

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 permitting action is for the construction and operation of a natural gas compression station. Permit #4282-00 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.

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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

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