

AIR QUALITY PERMIT

Issued To: Lodge Creek Pipelines, LLC
Signal Butte Compressor Station
P.O. Box 40
Havre, MT 59501

Permit: #3345-00
Application Complete: 07/19/04
Preliminary Determination Issued: 08/11/04
Department's Decision Issued: 08/27/04
Permit Final: 09/14/04
AFS: # 041-0010

An air quality permit, with conditions, is hereby granted to Lodge Creek Pipelines, LLC - Signal Butte Compressor Station (LCP), 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 #3345-00 is issued to LCP for the construction and operation of the Signal Butte Compressor Station. The facility is a natural gas central 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 near Havre, Montana. The legal description of the facility is the SE¼ of the SE¼ of Section 35, Township 37 North, Range 15 East, Hill County, Montana.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. LCP shall not operate more than four compressor engines at any given time and each engine shall have a maximum rated design capacity equal to, or less than 380 horsepower (hp)(ARM 17.8.749).
2. Emissions from each of the engines shall be controlled with a non-selective catalytic reduction (NSCR) unit and air to fuel ratio (AFR) controller and emissions from each of the engines shall not exceed the following limits (ARM 17.8.752):

Emission Limit (pounds per hour (lb/hr)) = Emission Factor (grams per break horsepower-hour (g/bhp-hr)) * maximum rated capacity of engine (bhp) * 0.002205 pounds per gram (lb/g).

NO _x ¹	1.0 g/bhp-hr
CO	1.0 g/bhp-hr
VOC	0.5 g/bhp-hr

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

¹ NO_x reported as NO₂.

4. LCP 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. LCP 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. LCP 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).

B. Testing Requirements

1. Each of the four compressor engines shall be initially tested for NO_x and CO, concurrently, to demonstrate compliance with the emission limits in Section II.A.2, 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 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. LCP 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. LCP 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 LCP 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

LCP shall provide the Department with written notification of the following information within the specified time periods (ARM 17.8.749).

1. LCP shall provide the Department with written notification of commencement of construction of the four new compressor engines within 30 days after commencement of construction.
2. LCP shall provide the Department with the actual start-up date of each of the four new compressor engines within 15 days after the actual start-up date of each respective engine.

SECTION III: General Conditions

- A. Inspection – LCP 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 LCP fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving LCP of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding. 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 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 LCP 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
Lodge Creek Pipelines, LLC
Signal Butte Compressor Station
Permit #3345-00

I. Introduction/Process Description

Lodge Creek Pipelines, LLC (LCP) is permitted for the construction and operation of the Signal Butte Compressor Station. The facility is a natural gas compressor station located near the town of Havre, in the SE¼ of the SE¼ of Section 35, Township 37 North, Range 15 East, Hill County, Montana.

A. Permitted Equipment

The facility consists of four 380 horsepower (hp) rich-burn Cummins engines with non-selective catalytic reduction (NSCR) and air to fuel ratio (AFR) control.

B. Source Description

The purpose of the LCP – Signal Butte Compressor Station is to compress natural gas for transmission through the natural gas pipeline. The compression of the gas is accomplished with the compressor engines described in Section I.A of the permit analysis.

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).

LCP shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to the following:

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

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

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

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. In addition, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Second, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Based on the information submitted by LCP, the Signal Butte 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. 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. LCP 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 LCP 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. LCP submitted the appropriate permit application fee for the current permit action.
 2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.
- F. ARM 17.8, Subchapter 7 – Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:
1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
 2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year (tpy) of any pollutant. LCP has the PTE greater than 25 tpy of nitrogen oxides (NO_x), carbon monoxide (CO), and Volatile Organic Compounds (VOC); 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, alteration or use of a source. LCP 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. LCP submitted an affidavit of publication of public notice for the June 25, 2004, issue of *The Havre Daily News*, a newspaper of general circulation in the Town of Havre, MT, in Hill 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 LCP 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 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.
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 (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 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 #3345-00 for LCP, 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 PM₁₀ nonattainment area.
- d. This facility is not subject to any current NSPS.
- e. This facility is not subject to any current NESHAP standards.
- f. This source is not a Title IV affected source, nor a solid waste combustion unit.
- g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that LCP would 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. LCP shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized.

A BACT analysis includes the consideration of all available control technologies, ranking them by control efficiency, and then evaluating them based on technical feasibility, cost effectiveness, and environmental effects. Available methods for controlling CO, NO_x, VOC, PM₁₀ and sulfur oxides (SO_x) emissions from the proposed project are addressed. The Department reviewed previous BACT determinations for compressor engines before making the following BACT determinations.

1. NO_x BACT

As part of the NO_x BACT analyses, 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;
- Prestratified 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;

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. Conversely, NSCR on lean burn and PCC engines is technically infeasible because the engine must burn a rich fuel mixture for the NSCR to operate properly.

Technically feasible control options, in order of the highest control efficiency to the lowest control efficiency, include the following control options contained in Table 1:

Table 1 – Technically Feasible Control Options

Control Technology	% Control	NO _x Emission Rate (g/Hp-hr)	NO _x Emission Rate (ton/yr)
Lean Burn Engine with SCR and AFR	97	0.3	1.81
Lean Burn Engine with SCR	97	0.3	1.81
Rich Burn Engine with NSCR and AFR	89	1.0	6.04
Rich Burn Engine with NSCR	89	1.0	6.04
Crossover Engine with SCR	89	1.0	6.04
Lean Burn Engine with AFR	84	1.5	9.05
Lean Burn Engine with No Additional Control	84	1.5	9.05
Crossover Engine with No Additional Controls	79	2.0	12.07
Crossover Engine with NSCR	79	2.0	12.07
Rich Burn Engine with AFR	0	9.4	56.74
Rich Burn Engine with No Additional Controls	0	9.4	56.74

The control methods listed in Table 1 are widely used; these control options cannot be ruled out based on environmental or energy impacts with the exception of engines utilizing an SCR unit. Additional adverse environmental impacts could occur with an SCR unit operating 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. Therefore, due to the additional environmental impacts associated with SCR units operating on units that typically operate at variable loads and because SCR units have not been determined to be BACT on compressor engines sized approximately the same as the proposed engine, the following engine types were eliminated from further BACT consideration: lean burn engine with SCR and AFR; lean burn engine with SCR; and crossover engine with SCR. Further, any differences in energy impacts between the different types of compressor engines would be minimal because the engines would have approximately the same maximum rated design capacity.

LCP is proposing to use four 380-hp Cummins rich burn engines equipped with an NSCR unit and an AFR controller. Table 2 shows the cost per ton of NO_x reduction achieved for the proposed engine. The capital cost of purchasing a new rich burn engine is considered zero because LPC already owns the proposed engine.

Table 2 – Cost Effectiveness

Control Technology	Total Annual Cost	Resulting NO_x Emissions (tpy)	Cost Effectiveness (\$/ton)
Rich Burn Engine with NSCR and AFR (proposed)	\$71,677	6.04	\$1414

The use of the rich burn engine with an NSCR unit and an AFR controller is the highest ranking control alternative that was not eliminated from further consideration due to being technically infeasible or due to the additional environmental impacts. Further, the cost effectiveness for the proposal is approximately \$1500 per ton more than the least expensive control option, which the Department believes is within industry norms. The Department agrees that the proposed emission limit of 1.0 grams per brake horsepower-hr (g/bhp-hr) using an NSCR unit and an AFR controller to control NO_x emissions from the proposed crossover engine retrofitted to a rich burn engine utilizing NSCR and AFR is BACT. A rich burn engine equipped with NSCR and AFR control is frequently used in the natural gas compression industry and the BACT determination is consistent with other recently permitted similar sources.

2. CO BACT

As part of the CO BACT analyses, 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; and
- Crossover engine with no additional controls.

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

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

Table 3 - Technically Feasible Control Options

Control Technology	% Control	NO _x Emission Rate (g/HP-hr)	NO _x Emission Rate (ton/yr)
Lean Burn Engine with Catalytic Oxidizer and AFR	94.9	0.5	3.02
Lean Burn Engine with Catalytic Oxidizer	94.9	0.5	3.02
Rich Burn Engine with NSCR and AFR	89.9	1.0	6.04
Rich Burn Engine with NSCR	89.9	1.0	6.04
Crossover Engine with Catalytic Oxidizer	84.8	1.5	9.05
Lean Burn Engine with AFR	72.7	2.7	16.30
Lean Burn Engine with No Additional Controls	72.7	2.7	16.30
Crossover Engine with NSCR	69.7	3.0	18.11
Crossover Engine with No Additional Controls	69.7	3.0	18.11
Rich Burn Engine with AFR	0	9.9	59.76
Rich Burn Engine with No Additional Controls	0	9.9	59.76

The control methods listed above are widely used; these control options cannot be ruled out based on environmental or energy impacts. Lean burn engines do emit relatively higher HAP (formaldehyde) emissions than rich burn engines. Lean burn engines cannot be eliminated based on higher formaldehyde emissions, but the higher formaldehyde emissions can effect the BACT determination.

LCP is proposing to use four 380-hp Cummins rich burn engines equipped with an NSCR unit and an AFR controller. Table 4 shows the cost per ton of CO reduction achieved for the various control options.

Table 4 – Cost Effectiveness

Control Technology	Total Annual Cost	Resulting CO Emissions (tpy)	Cost Effectiveness (\$/ton)
Lean Burn Engine with Catalytic Oxidizer and AFR	\$97,374	3.02	\$1,717
Lean Burn Engine with Catalytic Oxidizer	\$97,374	3.02	\$1,717
Rich Burn Engine with NSCR and AFR	\$71,677	6.04	\$1,335
Rich Burn Engine with NSCR	\$71,677	6.04	\$1,335
Crossover Engine with Catalytic Oxidizer	\$60,588	9.05	\$1,197
Lean Burn Engine with AFR	\$96,258	16.30	\$2,218
Lean Burn Engine with No Additional Controls	\$96,258	16.30	\$2,218
Crossover Engine with NSCR	\$57,998	18.1	\$1,394
Crossover Engine with No Additional Controls	\$56,419	18.1	\$1,356
Rich Burn Engine with AFR	\$70,098	59.7	----
Rich Burn Engine with No Additional Controls	\$70,098	59.7	----

The cost effectiveness of a lean burn engine with a catalytic oxidizer and AFR controller, as well as the cost effectiveness of a lean burn engine with a catalytic oxidizer, is approximately \$1,717 per ton of CO removed, which could be considered within industry norm. Table 5 examines the incremental cost per ton of CO removed between a lean burn engine with a catalytic oxidizer, a lean burn engine with a catalytic oxidizer and AFR controller, and the proposed rich burn engine with an NSCR unit and an AFR controller.

Table 5 – Incremental Cost Effectiveness

Control Technology	Total Annual Cost	Resulting CO Emissions (tpy)	Cost Effectiveness (\$/ton)
Lean Burn Engine with Catalytic Oxidizer and AFR	\$97,374	3.02	\$8,508
Lean Burn Engine with Catalytic Oxidizer	\$97,374	3.02	\$8,508
Rich Burn Engine with NSCR and AFR	\$71,677	6.04	----

While the cost effectiveness of a lean burn engine with a catalytic oxidizer and AFR controller, as well as the cost effectiveness of a lean burn engine with a catalytic oxidizer, is approximately \$1,717 per ton of CO removed, which could be considered within industry norm. Table 5 demonstrates that the incremental cost per ton of CO removed by utilizing either of the lean burn engine options is well above industry norms. Therefore, the use of the existing crossover engine retrofitted to a rich burn engine with an NSCR unit and an AFR controller is the most cost-effective method to control CO emissions. Purchasing either of the top controls, a lean burn engine equipped with an oxidation catalyst and an AFR controller or a lean burn engine equipped with an oxidation catalyst would cost an additional \$8,508 per additional ton of CO removed beyond the proposed engine. The Department agrees that the next best control option, the rich burn engine with an NSCR unit and an AFR controller, with an emission limit of 1.0 g/bhp-hr is BACT. A rich burn engine equipped with an NSCR unit and an AFR controller is frequently used in the natural gas compression industry and the BACT determination is consistent with other recently permitted similar sources.

3. VOC BACT

LCP proposed the use of an NSCR unit and an AFR controller to meet a pound per hour (lb/hr) limit equivalent to 0.50 g/hp-hr. The Department determined that no additional controls and burning pipeline quality natural gas to meet a lb/hr emission limit equivalent to 0.50 g/hp-hr constitute BACT for the proposed compressor engine.

4. PM₁₀ SO₂ BACT

The Department is not aware of any BACT determinations that have required controls for PM₁₀ or SO₂ emissions from natural gas fired compressor engines. LCP proposed no additional controls and burning pipeline quality natural gas as BACT for PM₁₀ and SO₂ emissions from the proposed compressor engine. Due to the relatively small amount of PM₁₀ and SO₂ 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 LCP's BACT proposal and determined that no additional controls and burning pipeline quality natural gas will constitute BACT for PM₁₀ and SO₂ emissions from the compressor engine.

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

Ton/year					
Source	PM ₁₀	NO _x	VOC	CO	SO _x
380-hp Compressor Engine (EU1)	0.26	3.68	1.84	3.68	.01
380-hp Compressor Engine (EU2)	0.26	3.68	1.84	3.68	.01
380-hp Compressor Engine (EU3)	0.26	3.68	1.84	3.68	.01
380-hp Compressor Engine (EU4)	0.26	3.68	1.84	3.68	.01
Total	1.04	14.72	7.36	14.72	0.04

380-hp Compressor Engines (4 Engines, EU1-EU4)

Brake Horsepower: 380 bhp
 Hours of operation: 8760 hr/yr

PM₁₀ Emissions

Emission Factor: 0.0194 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
 Fuel Consumption: 3.07 MMBtu/hr (Maximum Design)
 Calculations: 3.07 MMBtu/hr * 0.0194 lb/MMBtu = 0.0596 lb/hr
 0.0596 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.26 ton/yr

NO_x Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
 Calculations: 1.00 gram/bhp-hour * 380 bhp * 0.002205 lb/gram = 0.84 lb/hr
 0.84 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.67 ton/yr

VOC Emissions

Emission factor: 0.50 gram/bhp-hour (BACT Determination)
 Calculations: 0.50 gram/bhp-hour * 380 bhp * 0.002205 lb/gram = 0.42 lb/hr
 0.42 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.84 ton/yr

CO Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)
 Calculations: 1.00 gram/bhp-hour * 380 bhp * 0.002205 lb/gram = 0.84 lb/hr
 0.84 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.67 ton/yr

SO₂ Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 7/00)
 Fuel Consumption: 3.40 MMBtu/hr (Maximum Design)
 Calculations: 3.40 MMBtu/hr * 5.88E-04 lb/MMBtu = 0.002 lb/hr
 0.002 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.009 ton/yr

V. Existing Air Quality

The LCP Signal Butte Compressor Station is located near the town of Havre, in the SE¹/₄ of the SE¹/₄ of Section 35, Township 37 North, Range 15 East, Hill County, Montana. Hill 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 will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

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

VIII. Environmental Assessment

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

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

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Lodge Creek Pipelines, LLC
Signal Butte Compressor Station
P.O. Box 40
Havre, MT 59501

Air Quality Permit number: 3345-00

Preliminary Determination Issued: August 11, 2004

Department Decision Issued: August 27, 2004

Permit Final: September 14, 2004

1. *Legal Description of Site:* LCP – Signal Butte Compressor Station would be located in Hill County, Montana, near the town of Havre. The legal description would be the SE¼ of the SE¼ of Section 35, Township 37 North, Range 15 East.
2. *Description of Project:* LCP proposes to construct and operate four natural gas compressor engines for the compression and transportation of natural gas. The facility would consist of four 380-hp natural gas fired compressor engines.
3. *Objectives of Project:* The proposed project would provide business and revenue for LCP by allowing the company to gather and sell natural gas from the nearby gas field. Natural gas would be received and the LCP – Signal Butte 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 LCP 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 #3345-00.
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 on terrestrial or 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 to construct the facility. Any impacts on terrestrial and aquatic life and habitats from facility construction would be minor due to the relatively small size of the project. 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 minor 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 the chance of deposition of pollutants impacting water quality, quantity, and distribution would be minor. The facility is a central compressor station, not a production field facility; therefore, no discharges into surface water would occur from operating the facility. However, minor amounts of water may be required to control fugitive dust emissions from the access roads and the general facility property.

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

construction. Therefore, no impacts to water quality, quantity, and distribution would be expected from facility construction. Overall, any impacts to water quality, quantity, and distribution would be minor.

C. Geology and Soil Quality, Stability, and Moisture

Minor impacts would occur on the geology and soil quality, stability, and moisture from the proposed project because minor construction would be required to develop the facility. Small buildings would be constructed, and natural gas pipelines would be installed. 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.

Deposition of pollutants would occur; however, as described in Section 7.F of this EA, the Department determined that the chance of deposition of pollutants impacting the geology and soil in 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, and natural gas pipelines would be installed.

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 the chance of deposition of pollutants impacting the vegetation in the area surrounding the site would be minor. Overall, any impacts to vegetation cover, quantity, and quality would be minor.

E. Aesthetics

Minor aesthetic impacts would result because the proposed project would include the installation and operation of 4 engines to the facility. Small buildings would be constructed to house the engines, and natural gas pipelines would be installed. In addition, the facility would create additional noise in the area. However, the buildings constructed to house the engines would limit the additional noise to a certain extent. Overall, any aesthetic impacts would be minor.

F. Air Quality

The air quality of the area would realize minor impacts from the proposed project because the facility would emit the following air pollutants: PM₁₀, NO_x, CO, VOC, and SO_x. Deposition of these pollutants may occur. However, the Department determined that any air quality impacts from deposition would be minor due to dispersion characteristics of pollutants (stack height, stack temperature, etc.), the surrounding atmosphere (wind speed, wind direction, ambient temperature, etc.), and conditions placed in Permit #3345-00. Conditions would include, but would not be limited to BACT emission limits and opacity limitations. 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). In this case, the area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. The NRIS did not find any unique, endangered, fragile, or limited environmental resources near the proposed site. Due to the minor amounts of construction that would be required and the relatively low levels of pollutants that would be emitted, 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 on air and water resources from the pollutants (including deposition) 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 are not any previously recorded historic or archaeological sites within the proposed area. However, SHPO stated that the absence of cultural properties in the area does not mean that they do not exist, but may reflect a lack of previous cultural resource inventories in the area because SHPO records indicate only one previous cultural resource inventory has been conducted. Because only one previous cultural resource inventory has been conducted, SHPO recommended that a cultural resource inventory be conducted prior to construction activities to determine whether any historical or archaeological sites exist in the area. However, neither SHPO nor the Department have the authority to require a cultural authority resource inventory. Overall, the Department determined that the chance of the project impacting any historical and archaeological sites in the area would be minor due to the relatively small size of the project.

J. Cumulative and Secondary Impacts

The cumulative and secondary impacts from this project 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. Only small amounts of construction and land disturbance would be required to complete the project. Noise impacts would be minor due to the relatively small size of the facility and the fact that the engines would be housed within buildings. There is potential for other operations to locate near the site that the facility would use. However, any operations would have to apply for and receive the appropriate permits from the Department prior to operation. These permits would address the environmental impacts associated with the

operations at the proposed site. Overall, 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 #3345-00 and any impacts to the physical and biological environment would be minor.

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

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			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 cause minor, if any, disruptions to native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project would take place in a relatively remote location. The facility would be relatively small by industrial standards. 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 social structures and mores in the area would be minor.

B. Cultural Uniqueness and Diversity

The proposed project would cause minor, if any, disruptions to native or traditional lifestyles or communities (cultural uniqueness and diversity) in the area because the proposed project would take place in a relatively remote location. The facility would be relatively small by industrial standards. 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 cultural uniqueness and diversity in the area would be minor.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in only minor impacts to the local and state tax base and tax revenue because only one part-time employee would be hired for the proposed project. In addition, only minor amounts of construction would be needed to complete the project; therefore, any construction related jobs would be temporary and the impacts from the construction jobs would be temporary.

D. Agricultural or Industrial Production

The land at the proposed location is rural agricultural grazing land. Because the facility would be relatively small, the proposed project would result in only a minor disturbance to a relatively small amount of rural agricultural grazing land. 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. While emissions of air pollutants and corresponding deposition of pollutants would occur (as Section 7.F of this EA), the Department determined that the chance of deposition of pollutants impacting agricultural or industrial production in the area surrounding the site would be minor. Overall, any impacts to agricultural or industrial production would be minor.

E. Human Health

The proposed project would result in only 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.

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 produce noise.

G. Quantity and Distribution of Employment

The proposed project would have minor, if any, impacts on the quantity and distribution of employment because only one half-time employee would be hired for the proposed project. In addition, temporary construction-related positions may 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 corresponding relatively short time period that would be associated with constructing the facility.

H. Distribution of Population

The proposed project would have minor, if any, impacts on the distribution of population in the area because the facility would be located in a relatively remote location and the proposed project would only require one half-time employee to operate the facility. Therefore, no people would be moving to the area for employment opportunities.

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 #3345-00 and to assure compliance with applicable rules, standards, and Permit #3345-00. 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. Vehicle traffic during construction would be 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

The proposed project may represent a minor increase in the industrial activity in the area during construction of the project, but no additional industrial or commercial activity would result solely from the operation of the facility. Any impacts to industrial and commercial activities in 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 that would be affected by issuing Permit # 3345-00. The state standards would protect the proposed site and the environment surrounding the site.

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.) changes resulting from the proposed project would be minor.

Additional facilities would likely locate in the area to withdraw the methane from the coal beds and supply the LCP with gas to be compressed for transmission through a natural gas pipeline. However, any future facility would be required to apply for and receive the appropriate permits from the appropriate regulating authority. Impacts from any future facilities would be assessed through the appropriate permitting process. Further, as stated in Section VI of the permit analysis, a statewide EIS was completed to analyze potential impacts from coal bed methane exploration, production, development, and reclamation activities from a broad, wide, planning perspective.

Recommendation: No EIS is required.

The current permitting action is for the construction and operation of a natural gas compressor station. Permit #3345-00 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: Julie Merkel
Date: 08/06/04