

AIR QUALITY PERMIT

Issued To: Klabzuba Oil and Gas, Inc. Permit: #3145-05
Blaine County #5 Compressor Station Administrative Amendment (AA) Request
4100 1st Street West Received: 9/28/05
Havre, Montana 59501 Department Decision on AA: 11/14/05
Permit Final: 11/30/05
AFS #: 005-0013

An air quality permit, with conditions, is hereby granted to Klabzuba Oil and Gas, Incorporated (Klabzuba) for the Blaine County #5 Compressor Station, 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. Plant Location

The Blaine County #5 Compressor Station is located approximately 12 miles north of Chinook in the SE1/4 of the SE1/4 of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. A listing of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On September 28, 2005, the Department of Environmental Quality (Department) received a letter from Devon Louisiana Corporation (Devon) notifying the Department that ownership of the Blain County #5 Compressor Station has been transferred to Klabzuba. The current permit action will change the name of Devon to Klabzuba.

SECTION II. Conditions and Limitations

A. Emission Limitations

- 1. A non-selective catalytic reduction (NSCR) unit and an air-to-fuel ratio (AFR) controller shall control emissions from the 250-horsepower (hp) Waukesha F11GSI rich-burn natural gas-fired compressor engine. Emissions from the compressor engine shall not exceed the following limits (ARM 17.8.752):

Table with 2 columns: Pollutant and Limit. Rows: Nitrogen oxides (NOx), Carbon monoxide (CO), Volatile organic compounds (VOC). Limits: 0.55 lb/hr, 0.28 lb/hr, 0.55 lb/hr.

- 2. Emissions from the rich-burn compressor engine, less than or equal to 325-hp, shall be controlled with a NSCR unit and an AFR controller and emissions from the engine shall not exceed the following limits (ARM 17.8.752):

1 NOx reported as NO2.

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

NO_x² 1.0 g/bhp-hr
CO 2.0 g/bhp-hr
VOC 1.0 g/bhp-hr

3. Klabzuba shall operate all equipment to provide the maximum air pollution control for which it was designed (ARM 17.8.749).
4. Klabzuba 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 six consecutive minutes (ARM 17.8.304).
5. Klabzuba 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. Klabzuba 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. Klabzuba shall initially test the 250-hp Waukesha compressor engine for NO_x and CO concurrently, to demonstrate compliance with the emission limits in Section II.A.1, on an every five-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).
2. The rich-burn compressor engine, equal to or less than 325-hp, 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 five-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).
3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Klabzuba 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

² NO_x reported as NO₂.

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. Klabzuba 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 Klabzuba 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

Klabzuba shall provide the Department with written notification of the following information within the specified time periods:

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

SECTION III: General Conditions

- A. Inspection – Klabzuba 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 Klabzuba fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Klabzuba 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 Klabzuba 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 three 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
Klabzuba Oil and Gas, Incorporated
Blaine County #5 Compressor Station
Permit #3145-05

I. Introduction/Process Description

A. Permitted Equipment

Klabzuba Oil and Gas, Incorporated's (Klabzuba) Blaine County #5 Compressor Station consists of the following equipment:

1. (1) 250-horsepower (hp) Waukesha F11GSI compressor engine
2. (1) ALCO Dehydrator including a still vent, reboiler, and flash tank
3. (1) Rich-burn compressor engine equal to, or less than 325-hp
4. Associated equipment

B. Source Description

The natural gas compressor station is located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. The facility is known as the Blaine County #5 Compressor Station.

The main purpose of this facility is to gather and transmit natural gas using a reciprocating natural gas-fired engine, which drives a gas compressor. The dehydrator unit removes moisture from the natural gas before transmitting the gas downstream for further processing.

C. Permit History

On March 10, 2001, Permit **#3145-00** was issued to Klabzuba for the construction and operation of the Dry Fork Compressor Station located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana.

On May 3, 2001, Klabzuba requested that Permit #3145-00 be transferred to Havre Pipeline Company (HPC). In addition, HPC requested the facility be referred to as Blaine County #5 Compressor Station rather than the Dry Fork Compressor Station. The permit action transferred the permit from Klabzuba to HPC and changed the name of the compressor station from Dry Fork to Blaine County #5. Permit **#3145-01** replaced Permit #3145-00.

On May 24, 2004, the Department of Environmental Quality (Department) received a complete application from HPC for the modification of Montana Air Quality Permit #3145-01. The current permit action replaces the previously permitted 738-hp Waukesha 3521GSI compressor engine with a 250-hp Waukesha F11GSI compressor engine. Permit **#3145-02** replaced Permit #3145-01.

On August 23, 2004, the Department received a request to change the corporate name on Permit #3145-02 from HPC to Devon Louisiana Corporation (Devon). The permit action changed the corporate name on Permit #3145-02 from HPC to Devon. Permit **#3145-03** replaced Permit #3145-02.

On July 19, 2005, the Department received a complete application from Devon requesting a change to air quality Permit #3145-03. The proposed change includes adding a rich-burn compressor engine equal to, or less than 325 hp equipped with a non-selective catalytic reduction (NSCR) unit and an air-to-fuel ratio (AFR) controller. Permit **#3145-04** replaced Permit #3145-03.

D. Current Permit Action

On September 28, 2005, the Department received a letter from Devon notifying the Department that ownership of the Blain County #5 Compressor Station has been transferred to Klabzuba. The current permit action will change the name of Devon to Klabzuba. **Permit #3145-05** replaces Permit #3145-04.

E. Additional Information

Additional information, such as applicable rules and regulations, Best Available Control Technology (BACT)/Reasonably Available Control Technology (RACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

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. 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).

Klabzuba 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 four 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
11. ARM 17.8.230 Fluoride in Forage

Klabzuba 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, Klabzuba 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. 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. Klabzuba will consume pipeline quality natural gas, which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR 60), Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60 and because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

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

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

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. Second, 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. Third, 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 Klabzuba, the compressor station is not subject to the provisions of 40 CFR 63, Subpart HHH because the facility is not a major source of HAPs.

- D. 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. A fee was not required for the current permit action because the action is considered administrative.

2. ARM 17.8.505 When Permit Required--Exclusions. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. Klabzuba has an uncontrolled PTE greater than 25 tons per year of carbon monoxide (CO) and nitrogen oxides (NO_x); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. The current permit action is an administrative action; therefore, no permit application was required. (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. The current permit action is an administrative action; therefore, no permit application was required.
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 Klabzuba of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
 10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
 11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
 12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
 13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.
- G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:
1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
 2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3145-04 for Klabzuba, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.
 - e. This facility is not subject to any current NESHAP standards.
 - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that Klabzuba 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. Klabzuba 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 was not required for the current permit action because the current permit action is considered an administrative permit action.

IV. Emission Inventory

Source	Ton/year				
	PM ₁₀	NO _x	CO	VOC	SO _x
Waukesha F11GSI Compressor Engine	0.08	2.41	1.22	2.41	0.00
ALCO Dehydrator Unit	0.01	0.16	0.14	2.98	0.00
325-hp Compressor Engine	0.10	3.14	6.28	3.14	0.01
Total	0.19	5.71	7.64	8.53	0.01

Waukesha F11GSI Compressor Engine

Heat Input Capacity: 1.9 MMBtu/hr (Company Information)
 Annual Operation: 8,760 hr/yr
 Engine Power Output: 250 bhp

PM₁₀ Emissions:

Emission Factor: 9.91E-03 lb/MMBtu (AP-42, Section 3.2, Table 3.2-3, 07/00)
 Calculations: 9.91E-03 lb/MMBtu * 1.9 MMBtu/hr = 0.019 lb/hr
 0.023 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.08 ton/yr

NO_x Emissions:

Emission Factor: 1.0 g/bhp-hr (Department BACT Determination)
 Calculations: 1.0 g/bhp-hr * 250 bhp * 0.002205 lb/g = 0.55 lb/hr
 0.55 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 2.41 ton/yr

CO Emissions:

Emission Factor: 0.5 g/bhp-hr (Department BACT Determination)
 Calculations: 0.5 g/bhp-hr * 250 bhp * 0.002205 lb/g = 0.28 lb/hr
 0.28 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 1.22 ton/yr

VOC Emissions:

Emission Factor: 1.0 g/bhp-hr (Department BACT Determination)
 Calculations: 1.0 g/bhp-hr * 250 bhp * 0.002205 lb/g = 0.55 lb/hr
 0.55 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 2.41 ton/yr

SO_x Emissions:

Emission Factor: 5.88E-04 lb/MMBtu (AP-42, Section 3.2, Table 3.2-3, 07/00)
 Calculations: 5.88E-04 lb/MMBtu * 1.9 MMBtu/hr = 0.001 lb/hr
 0.001 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.004 ton/yr

ALCOA Dehydrator Unit

Maximum Design Capacity: 0.375 Bhp
 Hours of Operation: 8,760 hr/yr
 Fuel Heating Value: 1,000 Btu/SCF or 0.0010 MMSCF/MMBtu
 Fuel Combustion Rate: 0.375 MMBtu * 0.001 MMSCF/MMBtu * 8,760 hr/yr = 3.285 MMSCF/yr {Manufacturers Data}

Reboiler

PM₁₀ Emissions:

Emission Factor: 7.6 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}
 Control Efficiency: 0%
 Calculations: 7.6 lb/MMSCF * 3.285 MMSCF/yr * 0.0005 ton/lb = 0.012 ton/yr

NO_x Emissions:

Emission Factor: 100 lb/MMSCF {AP-42 Table 1.4-1 (7/98)}
Control Efficiency: 0%
Calculations: 100 lb/MMSCF * 3.285 MMScf/yr* 0.0005 ton/lb = 0.164 ton/yr

CO Emissions:

Emission Factor: 84 lb/MMSCF {AP-42 Table 1.4-1 (7/98)}
Control Efficiency: 0%
Calculations: 84 lb/MMSCF * 3.285 MMScf/yr* 0.0005 ton/lb = 0.138 ton/yr

VOC Emissions:

Emission Factor: 5.5 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}
Control Efficiency: 0%
Calculations: 5.5 lb/MMSCF * 3.285 MMScf/yr* 0.0005 ton/lb = 0.009 ton/yr

SO_x Emissions:

Emission Factor: 0.6 lb/MMSCF {AP-42 Table 1.4-2 (7/98)}
Control Efficiency: 0%
Calculations: 0.6 lb/MMSCF * 3.285 MMScf/yr* 0.0005 ton/lb = 0.001 ton/yr

Still Vent

VOC Emissions:

Emission Factor: 0.2237 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}}
Control Efficiency: 0%
Calculations: 0.2237 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.980 ton/yr

HAPs Emissions:

Emission Factor: 0.0563 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}}
Control Efficiency: 0%
Calculations: 0.0563 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.247 ton/yr

Flash Tank Off Gas

VOC Emissions:

Emission Factor: 0.04544 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}}
Control Efficiency: 0%
Calculations: 0.4544 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 1.990 ton/yr

HAPs Emissions:

Emission Factor: 0.0563 lb/hr {GRI-GLYcalc, EPA Approved Still Vent Emission Estimation Program}}
Control Efficiency: 0%
Calculations: 0.0563 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.024 ton/yr

Compressor Engine 325 hp

Brake Horsepower: 325 bhp
Hours of operation: 8,760 hr/yr

PM₁₀ Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 2.31 MMBtu/hr (Maximum Design)
Calculations: 2.31 MMBtu/hr * 9.50E-03 lb/MMBtu = 0.02 lb/hr
0.02 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.10 ton/yr

NO_x Emissions

Emission factor: 1.0 gram/bhp-hour (BACT Determination)
Calculations: $1.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.72 \text{ lb/hr}$
 $0.72 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.14 \text{ ton/yr}$

VOC Emissions

Emission factor: 1.0 gram/bhp-hour (BACT Determination)
Calculations: $1.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.72 \text{ lb/hr}$
 $0.72 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.14 \text{ ton/yr}$

CO Emissions

Emission factor: 2.0 grams/bhp-hour (BACT Determination)
Calculations: $2.0 \text{ gram/bhp-hour} * 325 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.43 \text{ lb/hr}$
 $22.23 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 6.28 \text{ ton/yr}$

SO_x Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)
Fuel Consumption: 2.31 MMBtu/hr (Maximum Design)
Calculations: $2.31 \text{ MMBtu/hr} * 5.88\text{E-}04 \text{ lb/MMBtu} = 0.00136 \text{ lb/hr}$
 $0.00136 \text{ lb/hr} * 8,760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.00594 \text{ ton/yr}$

V. Existing Air Quality

The Klabzuba Compressor Station is located approximately 12 miles north of Chinook in the SE¼ of the SE¼ of Section 19, Township 35 North, Range 20 East, in Blaine County, Montana. Blaine County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

VI. 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.

VII. Environmental Assessment

This permitting action will not result in an increase of emissions from the facility and is considered an administrative action; therefore, an Environmental Assessment is not required.

Analysis prepared by: Trista Glazier

Date: 11/10/05