DEQ
Montana Department
of Environmental Quality

June 21, 2016

Ross Whelchel
Havre Pipeline Company, LLC
40 E. Broadway
Butte, MT 59701

Dear Mr. Whelchel:

Montana Air Quality Permit #2923-07 is deemed final as of June 21, 2016, by the Department of Environmental Quality (Department). This permit is for a natural gas compressor station. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie A. Merkel
Air Permitting Supervisor
Air Quality Bureau
(406) 444-3626

John P. Proulx
Environmental Science Specialist
Air Quality Bureau
(406) 444-1277

JM:JP
Enclosure

Montana Department of Environmental Quality
Air, Energy and Mining Division

# Montana Air Quality Permit #2923-08

Havre Pipeline Company, LLC
a Texas Limited Liability Company
40 E. Broadway
Butte, MT 59701

June 21, 2016

# MONTANA AIR QUALITY PERMIT

Issued To: Havre Pipeline Company, LLC,
a Texas Limited Liability Company
Hill County #2 Compressor Station
c/o 40 E. Broadway
Butte, MT, 59701

MAQP #2923-08
Administrative Amendment (AA)
Request Received: 4/27/2016
Department Decision on AA:
06/03/2016
Permit Final: June 21, 2016
AFS #041-0004

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Havre Pipeline Company, LLC, a Texas Limited Liability Company (HPC) Hill County #2 Compressor Station pursuant to Sections 75-2-204 and 211, 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

MAQP #2923-08 is issued for the operation of a natural gas compressor station and associated equipment located in the SE¼ of the NW¼ of Section 34, Township 31 North, Range 15 East, of Hill County, Montana. The facility is known as the Hill County #2 Compressor Station. A complete list of equipment is included in Section I of the permit analysis.

B. Current Permit Action

On April 27, 2016, the Department received a de minimis notification from HPC outlining the addition of one (1) 188 horsepower Compressor engine. The engine is an existing permitting source from another HPC facility that will be relocated to the Hill County #2 Compressor Station. The Department provided HPC with a letter of concurrence dated May 5, 2016, approving the relocation of the 188 hp engine. The current action updates this permit to include this engine and its associated permit conditions.

Section II: Limitations and Conditions

A. Emission Limitations

1. The 325-hp Caterpillar G3406 TA rich-burn natural gas compressor engine shall be equipped with NSCR and an AFR controller. Emissions from the compressor engine shall not exceed the following pound per hour (lb/hr) limits (ARM 17.8.752):

| | |
|---|---|
| Oxides of Nitrogen ($NO_x$) | 0.72 lb/hr |
| Carbon Monoxide (CO) | 0.36 lb/hr |
| Volatile Organic Compounds (VOC) | 0.72 lb/hr |

2. The rich-burn natural gas compressor engine equal to, or less than 625-hp shall be equipped with NSCR and an AFR controller. Emissions from the compressor engine shall not exceed the following gram per brake horsepower-hour limits (gr/hp-hr) (ARM 17.8.752)

| | |
|---|---|
| $NO_x$ | 1.0 g/bhp-hr |
| CO | 2.0 g/bhp-hr |
| VOC | 1.0 g/bhp-hr |

Note: $NO_x$ reported as $NO_2$

3. The rich-burn natural gas compressor engine equal to, or less than 188-hp shall be equipped with NSCR and an AFR controller. The pound per hour (lb/hr) emission limits for the engine shall be determined using the following equation and pollutant specific gr/hp-hr emission factors (ARM 17.8.752).

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).

Emission Factors

| | |
|---|---|
| $NO_x$ | 1.0 g/bhp-hr |
| CO | 1.0 g/bhp-hr |
| VOC | 1.0 g/bhp-hr |

Note: NOx reported as NO2

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

5. HPC shall not cause or authorize emissions from the Hill #2 Compressor Station 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 (ARM 17.8.304).

6. HPC shall not cause or authorize emissions to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

7. HPC shall treat all unpaved portions of the access roads, parking lots, and general plant area with fresh 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).

8. HPC shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable engine (ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. HPC shall test the 325-hp Caterpillar G3406TA natural gas compressor engine for $NO_x$ and CO, concurrently, to demonstrate compliance with the $NO_x$ and CO emission limits contained in Section II.A.1 on an every four-year basis or according to another testing/monitoring schedule as approved by the Department (ARM 17.8.105 and ARM 17.8.749).

2. HPC shall initially test the natural gas compressor engine equal to, or less than 625-hp for $NO_x$ and CO, concurrently, to demonstrate compliance with the $NO_x$ and CO emission limits contained in Section II.A.2, within 180 days of the initial start-up. After the initial source test, testing shall continue on an every four-year basis or according to another testing/monitoring schedule as approved by the Department (ARM 17.8.105 and ARM 17.8.749).

3. HPC shall initially test the natural gas compressor engine equal to, or less than 188-hp for NOx and CO, concurrently, to demonstrate compliance with the NOx and CO emission limits contained in Section II.A.3, within 180 days of the initial start-up. After the initial source test, testing shall continue on an every five-year basis or according to another testing/monitoring schedule as approved by the Department (ARM 17.8.105 and ARM 17.8.749).

4. During each test, HPC shall monitor the compressor engine intake manifold temperature and pressure, exhaust temperature, manifold pressure, revolutions per minute (rpm), and all parameters necessary to calculate horsepower. This data shall be submitted to the Department with the source test report (ARM 17.8.105).

5. All compliance source tests shall be conducted in accordance with the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

6. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements:

1. HPC shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request.

2. 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).

3. HPC 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).

4. All records compiled in accordance with this permit must be maintained by HPC as a permanent business record for at least five years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Notification:

1. HPC shall provide the Department with written notification of the actual start-up date of the compressor engine equal to, or less than 625-hp within 15 days after the actual start-up date (ARM 17.8.749).

2. HPC shall provide the Department with written notification of the actual start-up date of the compressor engine equal to, or less than 188-hp within 15 days after the actual start-up date (ARM 17.8.749).

3. HPC shall follow all notification requirements as stated in the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

SECTION III: General Conditions

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

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

H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 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).

Montana Air Quality Permit (MAQP) Analysis
Havre Pipeline Company, LLC, a Texas Limited Liability Company
Hill County #2 Compressor Station
MAQP #2923-08

## I. Introduction/Process Description

### A. Site Location

Havre Pipeline Company, LLC, a Texas Limited Liability Company (HPC) owns and operates a natural gas compressor station located approximately 11 miles southwest of Havre and one-half mile north of the Rocky Boy Indian Reservation. The facility is known as the Hill County #2 Compressor Station. The legal description of the site is the SE¼ of the NW¼ of Section 34, Township 31 North, Range 15 East of Hill County, Montana. The facility occupies three rural acres that are fenced to restrict access.

### B. Permitted Equipment

The facility consists of the following equipment:

- (1) 325-horsepower (hp) Caterpillar G3406TA rich-burn compressor station with non-selective catalytic reduction (NSCR) and an air-to-fuel ratio (AFR) controller.
- (1) Equal to, or less than, 625-horsepower (hp) compressor station with NSCR and an AFR controller.
- (1) Equal to, or less than, 188-hp Compressor engine with NSCR and an AFR controller.

### C. Permit History

On March 13, 1996, the Department of Environmental Quality (Department) received an application from HPC requesting the installation and operation of a 625-hp Caterpillar "low-emission" compressor engine at the Hill County #2 Compressor Station. This facility gathered, compressed and sold pipeline quality natural gas for further transportation to major market areas. **MAQP # 2923-00** was issued on June 27, 1996, to HPC.

On June 3, 1999, the Department received notification that UMC Petroleum Corp was merged with Ocean Energy, Inc. The permit ownership was changed to reflect that the HPC compressor operates as a subsidiary of Ocean Energy, Inc. Also, rule references were updated. On June 27, 1999, **MAQP # 2923-01** replaced MAQP #2923-00.

In 1999, the U.S. Environmental Protection Agency (EPA) informed the Department that any condition in an air quality preconstruction permit would be considered a federally enforceable condition. However, there are certain state rules that were never intended to be federally enforceable. The Department notified all facilities holding preconstruction permits that they could request deletion of the conditions based on the Administrative Rules of Montana (ARM) 17.8.717 and ARM 17.8.315.

Removing either of these conditions does not relieve the facility from complying with the rule upon which the permit condition was based; removal only ensures that enforcement of that condition remains with the Department. This permit action removed the condition based on ARM 17.8.315 from HPC's permit. **MAQP #2923-02** replaced MAQP #2923-01.

On May 4, 2004, the Department received an application from HPC for modification of MAQP #2923-02. Specifically, the current permit action accounts for the replacement of the previously permitted 625-hp Caterpillar G398 TALE compressor engine with a 325-hp Caterpillar G3406 TA compressor engine. **MAQP #2923-03** replaced MAQP #2923-02.

On August 23, 2004, the Department received a request to change the corporate name on Permit #2923-03 from HPC to Devon-Louisiana Corporation. The current permit action changes the corporate name on MAQP #2923-03. **MAQP #2923-04** replaced MAQP #2923-03.

On November 8, 2005, the Department received a permit application to add a natural gas-fired compressor engine equal to, or less than 625-hp. The compressor engine proposed was a 4-stroke rich-burn engine equipped with non-selective catalytic reduction (NSCR) and an air-to-fuel ratio (AFR) controller. **MAQP #2923-05** replaced MAQP #2923-04.

On March 13, 2006, the Department received a request to change the company name on MAQP #2923-05 from Devon-Louisiana Corporation to Devon Energy Production Company, L.P (Devon). The Department changed the company name on MAQP #2923-06 as requested. **MAQP #2923-06** replaced MAQP #2923-05.

On January 16, 2014 and January 31, 2014, the Department received correspondence from Devon and HPC as notification of a transfer of ownership from Devon to HPC. The t permit action reflected the change in company name as well as updated the MAQP to reflect Department format, rule and references, and language. **MAQP #2923-07** replaced MAQP #2923-06.

D. Current Permit Action

On April 27, 2016, the Department received a de minimis notification from HPC outlining the addition of one (1) 188 horsepower Compressor engine. The engine is an existing permitting source under MAQP #3345-04 for the Signal Butte Compressor Station that will be relocated to the Hill County #2 Compressor Station. The Department provided HPC with a letter of concurrence dated May 5, 2016, approving the relocation of the 188 hp engine. This action updates the permit to include this engine and its associated permit conditions. **MAPQ #2923-08** replaces MAQP #2923-07

E. Response to Public Comments

| Person/Group Commenting | Permit Reference | Comment | Department Response |
|---|---|---|---|
| Havre Pipeline Company, LLC | Section II.A.3 | The Montana Department of Environmental Quality, Air Quality Bureau, Field Services Section (FSS), researched condition II.A.3 and suggested that it be changed to reflect pervious conditions for this specific piece of equipment. FSS suggested changing the language to "The pound per hour (lb/hr) emission limits for the engine shall be determined using the following equation and pollutant specific gr/hp-hr emission factors". | The Department agrees with the suggestion and has made the correction. |

F. 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 permit 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 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 17.8.105 Testing Requirements. Any person or persons responsible for the emissions 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.

2. 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).

HPC shall comply with all 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.

3. ARM 17.8.110, Malfunctions. 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.

4. ARM 17.8.111 Circumvention. No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

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

1. ARM 17.8.204 Ambient Air Monitoring Quality Assurance Procedures
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 Standards for Ozone
6. ARM 17.8.214 Ambient Air Quality Standards for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standards for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standards for Visibility
9. ARM 17.8.222 Ambient Air Quality Standards for Lead
10. ARM 17.8.223 Ambient Air Quality Standards for $PM_{10}$
11. ARM 17.8.230 Fluoride in Forage

HPC shall 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 to an 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. 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. Under this rule, HPC 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. HPC will consume pipeline quality natural gas, which will meet this limitation, in the compressor engine.

6. ARM 17.8.324(3) Hydrocarbon Emissions--Petroleum Products. 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 a tank is equipped with a vapor loss control device as described in (1) of this rule, or is a pressure tank as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 Code of Federal Regulations (CFR) Part 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the NSPS. HPC is not an NSPS affected facility because the facility does not meet any of the definitions for affected facility in 40 CFR Part 60.

   Subpart KKK, Standards of Performance for Equipment Leaks of Volatile Organic Compounds from Onshore Natural Gas Processing Plants. This subpart is not applicable to this facility because the facility does not process natural gas.

   40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines contains NSPS requirements that apply to owners or operators of stationary spark ignition (SI) internal combustion engine (ICE) that commence construction, modification, or reconstruction after June 12, 2006, where the stationary ICE is manufactured after July 1, 2007, for engines greater than 500 bhp, or after January 1, 2008, for engines less than 500 bhp. This NSPS applies to any stationary engine that meets these criteria.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. This rule incorporates, by reference, 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Source Categories. Based on the information submitted by HPC the engine(s) associated with MAQP #2923-08 are subject to NESHAP (40 CFR 63), as follows:

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

Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. As HPC is considered an area source of HAP emissions and operates RICE equipment the engine(s) are potentially subject to this subpart.

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. HPC must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The height of the stack for HPC 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. HPC was not required to submit a permit application fee for the current permit action because it is considered an administrative permit action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; and 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, as 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 which pro-rate 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. HPC has a pre-control PTE greater than 25 tons per year of CO; 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.

   HPC was not required to submit an application because the current permit action is considered an administrative amendment. (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. HPC was not required to submit a public notice because the current permit action is considered an administrative amendment.

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 HPC of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

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

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

G. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

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

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one HAP or PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule;

   c. PTE > 70 tons/year of $PM_{10}$ in a serious $PM_{10}$ nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. Title V of the FCAA of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. The following conclusions were reached in reviewing and issuing Air Quality Permit #2923-08 for HPC:

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

   c. This source is not located in a serious $PM_{10}$ nonattainment area.

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

   e. This facility is subject to current NESHAP standards (40 CFR 63, Subpart ZZZZ).

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

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

   Based on these facts, the Department determined that HPC is a minor source of emissions as defined under Title V.

III. BACT Determination

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

A BACT analysis was not required because the current permit action is considered an administrative amendment.

IV. Emission Inventory

| | Criteria Pollutant Emissions | | | | |
|---|---|---|---|---|---|
| | tons/year | | | | |
| Emission Source | $PM_{10}$ | $NO_x$ | CO | VOC | $SO_x$ |
| Caterpillar G3406TA Compressor Engine | 0.10 | 3.14 | 1.57 | 3.14 | 0.01 |
| Up to 625-hp Compressor Engine | 0.21 | 6.04 | 12.08 | 6.04 | 0.01 |
| 188-bhp Compressor Engine | 0.07 | 1.82 | 1.82 | 1.82 | .004 |

**Caterpillar G3406TA Compressor Engine**

Heat Input Capacity: 2.3 MMBtu/hr (Company Information)

Annual Operation: 8760 hr/yr

Engine Power Output: 325-hp

$PM_{10}$ 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 * 2.3 MMBtu/hr = 0.023 lb/hr

0.023 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.10 ton/yr

$NO_x$ Emissions:

Emission Factor: 1.0 g/hp-hr (Department BACT Determination)

Calculations: 1.0 g/hp-hr * 325 hp * 0.002205 lb/g = 0.72 lb/hr

0.72 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.14 ton/yr

CO Emissions:

Emission Factor: 0.5 g/hp-hr (Department BACT Determination)

Calculations: 0.5 g/hp-hr * 325 hp * 0.002205 lb/g = 0.36 lb/hr

0.36 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 1.57 ton/yr

VOC Emissions:

Emission Factor: 1.0 g/hp-hr (Department BACT Determination)

Calculations: 1.0 g/hp-hr * 325 hp * 0.002205 lb/g = 0.72 lb/hr

0.72 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 3.14 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 * 2.3 MMBtu/hr = 0.001 lb/hr

0.001 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

4.9 MMBtu/hr (Company Information)

Annual Operation: 8760 hr/yr

Engine Power Output: 625-hp

## Caterpillar G3406TA Compressor Engine

$PM_{10}$ 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 * 4.9 MMBtu/hr = 0.049 lb/hr

0.049 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.21 ton/yr

$NO_x$ Emissions:

Emission Factor: 1.0 g/hp-hr (Department BACT Determination)

Calculations: 1.0 g/hp-hr * 625 hp * 0.002205 lb/g = 1.38 lb/hr

1.38 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 6.04 ton/yr

CO Emissions:

Emission Factor: 2.0 g/hp-hr (Department BACT Determination)

Calculations: 2.0 g/hp-hr * 625 hp * 0.002205 lb/g = 2.76 lb/hr

2.76 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 12.08 ton/yr

VOC Emissions:

Emission Factor: 1.0 g/hp-hr (Department BACT Determination)

Calculations: 1.0 g/hp-hr * 625 hp * 0.002205 lb/g = 1.38 lb/hr

1.38 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 6.04 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 * 4.9 MMBtu/hr = 0.003 lb/hr

0.003 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

**188-bhp Rich-Burn Compressor Engines**

Brake Horsepower: 188 bhp

Hours of operation: 8,760 hr/yr

PM Emissions

Emission Factor: 0.00991 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)

Fuel Consumption: 1.62 MMBtu/hr (Maximum Design)

Calculations: 1.62 MMBtu/hr * 0.0091 lb/MMBtu *8,760 hr/yr * 0.0005 ton/lb = 0.070 ton/yr

$PM_{10}$ Emissions

Emission Factor: 0.0095 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)

Fuel Consumption: 1.62 MMBtu/hr (Maximum Design)

Calculations: 1.62 MMBtu/hr * 0.0095 lb/MMBtu *8,760 hr/yr * 0.0005 ton/lb = 0.067 ton/yr

$PM_{2.5}$ Emissions

Emission Factor: 0.0095 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)

**188-bhp Rich-Burn Compressor Engines**

| | | |
|---|---|---|
| Fuel Consumption: | 1.62 MMBtu/hr | (Maximum Design) |
| Calculations: | 1.62 MMBtu/hr * 0.0095 lb/MMBtu *8,760 hr/yr * 0.0005 ton/lb = 0.067 ton/yr | |

$NO_X$ Emissions

| | | |
|---|---|---|
| Emission factor: | 1.00 gram/bhp-hour | (BACT Determination) |
| Calculations: | 1.00 gram/bhp-hour * 188 bhp * 0.002205 lb/gram = 0.84 lb/hr<br>0.84 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 1.82 ton/yr | |

VOC Emissions

| | | |
|---|---|---|
| Emission factor: | 1.00 gram/bhp-hour | (BACT Determination) |
| Calculations: | 1.00 gram/bhp-hour * 188 bhp * 0.002205 lb/gram = 0.84 lb/hr<br>0.84 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 1.82 ton/yr | |

CO Emissions

| | | |
|---|---|---|
| Emission factor: | 1.00 gram/bhp-hour | (BACT Determination) |
| Calculations: | 1.00 gram/bhp-hour * 188 bhp * 0.002205 lb/gram = 0.84 lb/hr<br>0.84 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 1.82 ton/yr | |

$SO_2$ Emissions

| | | |
|---|---|---|
| Emission factor: | 5.88E-04 lb/MMBtu | (AP-42, Chapter 3, Table 3.2-2, 7/00) |
| Fuel Consumption: | 1.62 MMBtu/hr | (Maximum Design) |
| Calculations: | 1.62 MMBtu/hr * 0.000588 lb/MMBtu *8,760 hr/yr * 0.0005 ton/lb = 0.004 ton/yr | |

HAPs Emissions

| | | |
|---|---|---|
| Emission factor: | 0.1029 lb/MMBtu | (AP-42, Chapter 3, Table 3.2-2, 7/00) |
| Fuel Consumption: | 1.62 MMBtu/hr | (Maximum Design) |
| Calculations: | 1.62 MMBtu/hr * 0.1029 lb/MMBtu *8,760 hr/yr * 0.0005 ton/lb = 0.729 ton/yr | |

## V. Existing Air Quality

The facility is located in the SE¼ of the NW¼ of Section 34, Township 31 North, Range 15 East, in Hill County, Montana. Hill County is considered unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

## VI. Ambient Air Impact Analysis

The current permit action is an administrative permitting action with a minor increase in potential emissions. Due to the minor amount of emissions increase, the Department that there is a minimal impact to ambient air quality and did not conduct an ambient air impact analysis. MAQP #2923-08 has limits and conditions that are designed to be protective of all ambient air quality standards.

VII. Taking or Damaging Implication Analysis

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

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

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

VIII. Environmental Assessment

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

Analysis prepared by: John P. Proulx
Date: May 16, 2016