



November 12, 2015

Kale Hanner  
ONEOK Rockies Midstream, LLC  
P.O. Box 871  
Tulsa, OK 74102-0871

Dear Mr. Hanner:

Montana Air Quality Permit #1638-07 is deemed final as of November 11, 2015, by the Department of Environmental Quality (Department). This permit is for ONEOK Rockies Midstream, LLC's Clear Lake 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,

A handwritten signature in black ink that reads "Julie A. Merkel".

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

A handwritten signature in black ink that reads "Shawn Juers".

Shawn Juers  
Environmental Engineer  
Air Quality Bureau  
(406) 444-2049

JM:SJ  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #1638-07

ONEOK Rockies Midstream, LLC  
Clear Lake Compressor Station  
SE $\frac{1}{4}$  of the NE $\frac{1}{4}$  of Section 17, Township 33 North, Range 58 East, in Sheridan County, Montana  
P.O. Box 871  
Tulsa, OK 74102-0871

November 11, 2015



# MONTANA AIR QUALITY PERMIT

Issued To: ONEOK Rockies Midstream, LLC  
Clear Lake Compressor Station  
P.O. Box 871  
Tulsa, OK 74102-0871

Montana Air Quality Permit #1638-07  
Administrative Amendment (AA)  
Request Received: 10/13/15  
Department Decision on AA: 10/23/15  
Permit Final: 11/11/15  
AFS: #091-0001

A Montana Air Quality Permit, with conditions, is hereby granted to ONEOK Rockies Midstream, LLC, Clear Lake Compressor Station (ORM), 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. Location

ORM operates a natural gas compressor station and associated equipment located approximately in the SE<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 17, Township 33 North, Range 58 East, in Sheridan County, Montana. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

### B. Current Permit Action

The Department of Environmental Quality – Air Quality Bureau (Department) received an administrative amendment request from ORM to correct instances in the permit where the facility was referred to as the Clear Creek compressor station. ORM requested that the facility be referred to as the Clear Lake compressor station. All occurrences to the Clear Creek name have been changed to Clear Lake.

## SECTION II: Conditions and Limitations

### A. Emission Limitations

1. ORM shall install, operate, and properly maintain a compressor engine no larger than 550 horsepower (hp) which shall be controlled by a catalytic converter. The emissions from this engine shall not exceed the following limits (ARM 17.8.749 and ARM 17.8.752).

#### Emission Factors

Oxides of Nitrogen (NO <sub>x</sub> ):	2.42g/bhp-hr
Carbon Monoxide (CO):	2.42 g/bhp-hr
Volatile Organic Compounds (VOC):	0.18 g/bhp-hr

2. ARM shall use only sweet gas as fuel for the compressor engine (ARM 17.8.752).

3. ORM shall operate all equipment to provide the maximum air pollution control for which it was designed (ARM 17.8.752).
4. ORM 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 twenty percent (20%) or greater averaged over 6 consecutive minutes (ARM 17.8.304).
5. ORM 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).
6. ORM 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 (ARM 17.8.749).
7. ORM shall operate the flare stack only for equipment blowdown when shutdown is required for repair or for emergency use. This flare is not permitted to continuously flare sour gases (ARM 17.8.749).
8. ORM shall not operate the flare for more than 149 hours in a 12-hour month rolling period for equipment blowdown when shutdown is required for repairs or maintenance (ARM 17.8.749 and ARM 17.8.1204).

B. Testing Requirements

1. The Department shall determine if testing is required on any compressor engine installed under ARM 17.8.705(1)(q). ORM must demonstrate compliance with the emission limitations contained in Section II.A.1 (ARM 17.8.105 and ARM 17.8.749).
2. All source tests shall be conducted in accordance with 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. ORM 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 most recent emission inventory report and sources identified in this permit.

Production information shall be gathered on a calendar-year basis and be submitted to the Department by the date required in the emission inventory request and shall be in units as required by the department. This information is required for the annual emission inventory and to verify compliance with permit

limitations. In addition, ORM shall submit the following information annually with the annual emission inventory request. This information is required for the annual emission inventory, as well as to verify compliance with permit limitations (ARM 17.8.505).

- a. Amount of fuel consumed by the compressor engine (corrected to 14.7 psia and 60 F)
  - b. Hours of operation for the compressor engine
  - c. Amount of fuel consumed by the glycol heater
  - d. For each flaring incident, ORM shall report
    - i. Date and duration of incident
    - ii. Amount of gas sent to the flare in scf (14.7 psia and 60 F)
    - iii. Percent of H<sub>2</sub>S in the gas sent to the flare
2. All records compiled in accordance with this permit must be maintained by ORM 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).
  3. ORM shall notify the Department of any construction or improvement projects conducted pursuant to ARM 17.8.745 that would include *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department in writing 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) and ARM 17.8.745.
  4. ORM shall document by month, the hours of operation of the emergency flare. By the 25<sup>th</sup> of each month, ORM shall total the monthly hours of operation of the emergency flare during the previous 12 months to verify compliance with the limitation in Section II.A.8. A written report of the compliance verification shall be submitted along with the annual emissions inventory (ARM 17.8.749).
  5. ORM shall annually certify that its emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

### SECTION III: General Conditions

- A. Inspection – ORM 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 (e.g., Continuous Emission Monitoring System (CEMS), Compliance Emission Rate Monitoring System (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 ORM fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving ORM 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, failure to pay the annual operation fee by ORM may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

MONTANA AIR QUALITY PERMIT (MAQP) ANALYSIS  
ONEOK Rockies Midstream, LLC  
Clear Lake Compressor Station  
MAQP #1638-07

I. Introduction/Process Description

A. Permitted Equipment

ONEOK Rockies Midstream, LLC, Clear Lake Compressor Station (ORM) is permitted for the operation of a natural gas compressor station located in the SE<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 17, Township 33 North, Range 58 East, in Sheridan County, Montana. The facility consists of the following equipment:

- 550 horsepower (hp) Caterpillar G398TA dual-fired compressor engine with a Johnson Matthey DX40 Catalytic Converter
- 173 hp Ajax DPC-180 rich burn, 1 cycle engine
- 1.2 MMBtu/hr glycol heater to keep the gas lines from freezing
- Emergency flare
- Fixed roof 400 barrel (BBL) condensate/water tank

There is no glycol dehydration unit located at this site.

B. Source Description

The Clear Lake Compressor Station compresses and transports natural gas from nearby gas fields. The natural gas-fired compressor engines compress the gas for transmission through the pipeline.

C. Permit History

On October 5, 1981, the Department of Environmental Quality (Department) received a permit application from Phillips Petroleum to construct a natural gas compressor station near Dagmar, Montana. This action permitted two (2) 580 hp Waukesha L7042-G compressor engines, one (1) 1.2 MMBtu/hr glycol heater, a crude/water tank, and a methanol tank. The permit was approved on November 16, 1981, and given **Permit #1638**. A Best Available Control Technology (BACT) analysis in Permit #1638 resulted in a decision of “no controls” for the emissions from the compressor engines. The Clear Lake Compressor Station was constructed by Phillips Petroleum in 1981.

On January 2, 1986, Koch Hydrocarbon acquired several compressor stations from Phillips Petroleum, including the Clear Lake Compressor Station.

Operation of the compressor station ceased at some point in 1988; the facility was brought back on line in June of 1991, at which time the 245 hp Caterpillar G379-NA compressor engine was installed.

On August 19, 1992, Permit #1638 for the Clear Lake Compressor Station was revoked due to lack of payment of the annual operating fees.

On December 30, 1992, Permit #1638 for the Clear Lake Compressor Station was reinstated upon receipt of payment for the annual operating fees.

On June 5, 1996, the Department issued **Permit #1638-01** for the operation of the 245 hp Caterpillar G379-NA natural gas compressor engine. This engine replaced the two 580 hp Waukesha L7042-G compressor engines. Koch was required to achieve the NO<sub>x</sub> emission limit set forth in Section II.A.1 of this permit by installing an AFR controller on the compressor engine. Additionally, Permit #1638-01 added the 4' x 60' flare to the equipment list and recognized the change in ownership of this facility from Phillips Petroleum to Koch.

On January 19, 1997, the Department issued **Permit #1638-02** for the installation of an NSCR unit on the 245 hp Caterpillar G379-NA natural gas compressor engine in order to demonstrate compliance with the NO<sub>x</sub> and CO emission limits during the source test. The installation of this control equipment was allowed by the Department under the provisions of ARM 17.8.705(1)(q). However, since the NSCR unit was in place and operating during the source test, Koch must continue to operate the NSCR unit until a source testing demonstrating compliance is conducted without the equipment. Permit #1638-02 required the installation, operation, and proper maintenance of the NSCR unit on the Caterpillar G379-NA compressor engine.

On March 24, 1997, the Department received a request to modify Permit #1638-02. The modification transferred ownership of Permit #1638-02 from Koch Hydrocarbon Company to Bear Paw Energy, Inc. **Permit #1638-03** replaced Permit #1638-02.

On August 24, 1998, the Department received a complete application to alter Permit #1638-03. A permit alternation is required because the company is replacing the existing 245 hp Caterpillar G379-NA compressor engine and non-selective catalytic reduction unit with a 550 hp Caterpillar G398 TA compressor engine and Johnson Matthey DX40 Catalytic Converter. In addition the department has identified that a 173 hp Ajax DPC-180, rich burn, 1 cycle compressor engine is being used temporarily at this site. However this engine was added under ARM 17.8.705(1)(q) and a permit was not required. **Permit #1638-04** replaced Permit #1638-03.

The Department received notification on June 18, 2012, from Bear Paw Energy, LLC., requesting an amendment to MAQP #1638-04 to change their name to ONEOK Rockies Midstream, LLC. All permit references to the facility's name with the exception of the permit history have been changed throughout this document. Under the amendment, the mailing address for ONEOK has also been updated. In addition, rule references and permit language were updated. **MAQP #1638-05** replaced MAQP #1638-04.



The Department received an administrative amendment request from ORM to reduce the allowable hours of operation of the flare from 188 hours per year to 149 hours per year. Doing so brought total allowable emissions for the source below 80 tons per year for all pollutants. **MAQP #1638-06** replaced MAQP #1638-05.

#### D. Current Permit Action

On October 13, 2015, the Department received an administrative amendment request from ORM to correct instances in the permit where the facility was referred to as the Clear Creek compressor station. ORM requested that the facility be referred to as the Clear Lake compressor station. All occurrences to the Clear Creek name were changed to Clear Lake. **MAQP #1638-07** replaces MAQP #1638-06.

#### E. Additional Information

Additional information, such as applicable rules and regulations, 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).

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

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

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

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

ORM 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 (PM). (2) Under this rule, ORM 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. ORM will utilize natural gas in its fuel burning equipment, which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.

The Clear Lake compressor station is not subject to 40 CFR 60, Subpart KKK, because it does not meet the definition of a natural gas processing plant as defined in this subpart. In addition, 40 CFR 60, Subpart LLL is not applicable to the compressor station because the facility does not utilize a sweetening unit to process sour gas.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with standards and provisions of 40 CFR Part 63, Subpart HH. The Clear Lake Compressor Station is not a National Emission Standards for Hazardous Air Pollutants (NESHAP) affected source because the facility is not a major source of Hazardous Air Pollutants (HAPs).

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. The Clear Lake Compressor Station is not a NESHAP affected source because the facility does not have a glycol dehydration unit. In addition, the source is not a major source of HAPs.

Owners or operators of stationary reciprocating internal combustion engines (RICE) are subject to 40 CFR Part 63, Subpart ZZZZ. The Clear Lake Compressor Station is considered an area source.

- 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. As the current action is administrative, an application fee was not required.

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

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

E. 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. ORM has a PTE greater than 25 tons per year of sulfur dioxide therefore an MAQP is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements.  
(1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. ORM was not required to submit an application for the current permit action because the permit action is considered an administrative 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. ORM was not required to notify the public of the current permit action because the current action is considered an administrative action.
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 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 ORM 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.
- F. 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).

- G. 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 PM<sub>10</sub> in a serious PM<sub>10</sub> 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 #1638-05 for ORM, the following conclusions were made:
    - a. The facility's PTE is less than 100 tons/year for any pollutant. Permit #1638-05 includes federally enforceable limits to keep emissions below 100 tons/year.
    - 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<sub>10</sub> nonattainment area.
    - d. This facility is not subject to any current NSPS.
    - e. This facility is subject to NESHAP (40 CFR 63 Subpart ZZZZ).
    - f. This source is not a Title IV affected source, nor a solid waste combustion unit.
    - g. This source is not an EPA designated Title V source.
    - h. As allowed by ARM 17.8.1204(3), the Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's potential to emit.
      - i. In applying for an exemption under this section, the owner or operator of the source shall certify to the Department that the source's potential to emit, does not require the source to obtain an air quality operating permit.

- ii. Any source that obtains a federally enforceable limit on potential to emit shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit.

ORM has taken federally enforceable permit limits to keep potential emissions below major source permitting thresholds. Therefore, the facility is not a major source and thus a Title V operating permit is not required. The Department determined that the annual reporting requirements contained in the permit are sufficient to satisfy this requirement.

- 3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. ORM shall annually certify that its actual emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204 (3)(b). The annual certification shall comply with requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emission inventory information.

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

### III. BACT Determination

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

No new or modified source is contemplated in this action as this action is considered an administrative action. Therefore, no BACT determination is required.

### IV. Emission Inventory

<b>Ton/Year</b>					
Source	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
550-bhp Caterpillar G398 TA Compressor Engine	10.95	10.6	0.79	10.6	0.01
1.2 MMBTU/hr Glycol Line Heater	0.0068	0.2256	0.0131	0.0453	0.0014
4" Emergency Flare	negligible	negligible	negligible	negligible	78.78
<b>Total</b>	<b>10.96</b>	<b>10.83</b>	<b>0.80</b>	<b>10.65</b>	<b>78.79</b>

#### **550-bhp Caterpillar G398 TA**

#### **Compressor Engine**

Brake                    550-bhp  
Horsepower:  
Hours of                8760 hr/yr  
Operation:

PM<sub>10</sub> Emissions

Emission Factor: 10 (2-02-002-02, AFSEF  
 lbs/MMSCF page 32)

Fuel Consumption: 6.0 MMSCF/day (Maximum Design)

Calculations: 10 lbs/MMSCF\*6.0 MMSCF/day = 60 lbs/day  
 60.00 lbs /day\*365 days/yr\*0.0005 = 10.95 tons/yr  
 tons/lb =

NOx Emissions

Emission factor: 2.00 grams/bhp-hr (Manufacturer Controlled Emission Factor)

Calculations: 2.00 grams/bhp-hr\*550 bhp\*0.002205 lb/gram = 2.43 lbs/hr  
 2.43 lb/hr\*8760 hr/yr\* 0.0005 = 10.6 tons/yr  
 tons/lb =

VOC Emissions

Emission factor: 0.15 grams/bhp-hr (Manufacturer Controlled Emission Factor)

Calculations: 0.15 grams/bhp-hr\*550 bhp\*0.002205 lb/gram = 0.18 lbs/hr  
 0.18 lb/hr\*8760 hr/yr\* 0.0005 = 0.79 tons/yr  
 tons/lb =

CO Emissions

Emission factor: 2.00 grams/bhp-hr (Manufacturer Controlled Emission Factor)

Calculations: 2.00 grams/bhp-hr\*550 bhp\*0.002205 lb/gram = 2.43 lbs/hr  
 2.43 lb/hr\*8760 hr/yr\* 0.0005 = 10.6 tons/yr  
 tons/lb =

SOx Emission

Emission factor: 0.002 grams/bhp-hr (AP\_42, Table 3.2-1 9/85)

Fuel Consumption: 0.002 grams/bhp-hr\*550 bhp\*0.002205 = 0.002 lbs/hr  
 lb/gram =

Calculations: 0.002 lb/hr\*8760 hr/yr\* 0.0005 = 0.01 tons/yr  
 tons/lb =

1.2 MMBTU/hr Glycol Line Heater

Heater Rating 1.2 MMBTU/hr (maximum design)

Hours of Operation 8760 hrs/yr

Propane Combustion 2,322 BTU/scf or 44.31e-04 scf/BTU

Fuel Consumption:



PM<sub>10</sub> Emissions

Emission Factor: 3.00 lbs/MMSCF (AFSEF 1-03-006-03)

Calculations: 3.00\*lbs/MMSCF\*0.000431 scf/BTU\*0.000001 1.3E-09 lbs/Btu  
MMSCF/scf =  
1.3e-09 lbs/Btu\*1.2 MMBtu/hr\*1,000,000 0.0016 lbs/hr  
Btu/MMBtu=  
0.0016 lbs/hr\*8760 hr/yr\*0.0005 tons/lb = 0.0068 tons/yr

NO<sub>x</sub> Emissions

Emission Factor: 100 lbs/MMSCF (AP-42, 1.4-2,7/93)

Calculations: 100\*lbs/MMSCF\*0.000431 scf/BTU\*0.000001 4.30E-08 lbs/Btu  
MMSCF/scf =  
4.3e-08 lbs/Btu\*1.2 MMBtu/hr\*1,000,000 0.0516 lbs/hr  
Btu/MMBtu=  
0.0516 lbs/hr\*8760 hr/yr\*0.0005 0.2256 tons/yr  
tons/lb =

VOC Emissions

5.80 lbs/MMSCF (AP-42, 1.4-3, 7/93)

5.80\*lbs/MMSCF\*0.000431 scf/BTU\*0.000001 2.5E-09 lbs/Btu  
MMSCF/scf =  
2.5e-09 lbs/Btu\*1.2 MMBtu/hr\*1,000,000 0.003 lbs/hr  
Btu/MMBtu=  
0.0030 lbs/hr\*8760 hr/yr\*0.0005 0.0131 tons/yr  
tons/lb =

CO Emissions

Emission Factor: 20 lbs/MMSCF (AFSEF 1-03-006-03)

Calculations: 20\*lbs/MMSCF\*0.000431 scf/BTU\*0.000001 8.6E-09 lbs/Btu  
MMSCF/scf =  
8.6e-09 lbs/Btu\*1.2 MMBtu/hr\*1,000,000 0.0103 lbs/hr  
Btu/MMBtu=  
0.0103 lbs/hr\*8760 hr/yr\*0.0005 0.0453 tons/yr  
tons/lb =

SO<sub>x</sub> Emissions

Emission Factor: 0.60 lbs/MMSCF (AP42, 1.4-2, 7/93)

Calculations: 0.6\*lbs/MMSCF\*0.000431 scf/BTU\*0.000001 2.6E-10 lbs/Btu  
MMSCF/scf =  
2.6e-10 lbs/Btu\*1.2 MMBtu/hr\*1,000,000 0.0003 lbs/hr  
Btu/MMBtu=  
0.0003 lbs/hr\*8760 hr/yr\*0.0005 0.0014 tons/yr  
tons/lb =

## 4" Emergency Flare

**Fuel Type** Sour Natural Gas with  
7% H<sub>2</sub>S  
**Flare Capacity** 90,000  
SCF/hr  
**Hours of Operation** 149 hr/yr

### PM<sub>10</sub> Emissions (Soot)

**Emission Factor:** 0.0 lbs/MMSCF (AP-42,11.5-1,  
7/93)  
**Calculations:** 0.0 lbs/MMSCF\*90,000 scf/hr\*1.00e+06  
MMSCF/scf  
0 lbs/hr  
0 tons/yr

### NO<sub>x</sub> Emissions

**Emission Factor:** 0.07 lbs/MMSCF (AP-42,11.5-1,  
7/93)  
**Calculations:** 0.07 lbs/MMSCF\*90,000 scf/hr\*1.00e+06  
MMSCF/scf  
0.0061 lbs/hr  
0.0004 tons/yr

### VOC Emissions

**Emission Factor:** 0.14 lbs/MMSCF (AP-42,11.5-1,  
7/93)  
**Calculations:** 0.14 lbs/MMSCF\*90,000 scf/hr\*1.00e+06  
MMSCF/scf  
0.0013 lbs/hr  
0.0001 tons/yr

### CO Emissions

**Emission Factor:** 0.37 lbs/MMSCF (AP-42,11.5-1,  
7/93)  
**Calculations:** 0.37 lbs/MMSCF\*90,000 scf/hr\*1.00e+06  
MMSCF/scf  
0.0333 lbs/hr  
0.0024 tons/yr

### SO<sub>x</sub> Emissions

**SO<sub>x</sub> Emission Factor**  
**Calculation**

Assume Ideal gas with 7.0 moles hydrogen sulfide (H<sub>2</sub>S) in a flared gas with all H<sub>2</sub>S converted to SO<sub>x</sub>

$$7.0\% \text{ H}_2\text{S} = (1 \text{ e } 06 \text{ ppm}/100\%) = 70,000 \text{ ppm H}_2\text{S} * (1 \text{ grain}/100 \text{ scf})/16 \text{ ppm} * 1 \text{ lb}/7,000 \text{ grains} = 0.625 \text{ lbs H}_2\text{S}/100 \text{ scf}$$

$$0.625 \text{ lbs H}_2\text{S}/100 \text{ scf} * 64.06 \text{ lbs SO}_2/32.08 \text{ lbs H}_2\text{S} = 1.175 \text{ lbs SO}_2/100 \text{ scf}$$

Emission Factor    0.01175  
                               lbs/scf  
 Calculations        0.01175 lbs/scf\*90,000 scf/hr =  
                               1,057 lbs/hr  
                               1,057 lbs/hr\* 149 hr/yr\*0.0005                    78.78    tons/yr  
                               tons/lb

V. Existing Air Quality

The compressor station is located in the SE¼ of the NE¼ of Section 17, Township 33 North, Range 58 East, in Sheridan County, Montana. The air quality of this area is classified as either Better than National Standards or Unclassifiable/Attainment for the National Ambient Air Quality Standards (NAAQS).

VI. Ambient Air Impact Analysis

The current action is an administrative action. No impact to ambient air is expected.

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.

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)

YES	NO	
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

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

#### VIII. Montana Environmental Policy Act

This permit action is considered an administrative action; therefore, an Environmental Assessment is not required.

MAQP Analysis Prepared by: S. Juers  
October 22, 2015