



Montana Department of  
**ENVIRONMENTAL QUALITY**

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July 25, 2012

Mr. Geoffrey Sands  
ONEOK Rockies Midstream, LLC  
Bainville Compressor Station  
P.O. Box 871  
Tulsa, OK 74102-0871

Dear Mr. Sands:

Montana Air Quality Permit #1546-06 is deemed final as of July 25, 2012, 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,

Charles Homer  
Manager, Air Permitting, Compliance and Registration  
Air Resources Management Bureau  
(406) 444-5279

Craig Henrikson, P.E.  
Environmental Engineer  
Air Resources Management Bureau  
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CH:CPH  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #1546-06

ONEOK Rockies Midstream, LLC  
Bainville Compressor Station  
P.O. Box 871  
Tulsa, OK 74102-0871

July 25, 2012



## MONTANA AIR QUALITY PERMIT

Issued To: ONEOK Rockies Midstream, LLC.      Montana Air Quality Permit: #1546-06  
P.O. Box 871      Administrative Amendment (AA)  
Tulsa, O.K. 74102      Request Received: 06/18/12  
Department Decision on AA: 07/09/12  
Permit Final: 07/25/2012  
AFS #: 085-0003

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to ONEOK Rockies Midstream, LLC (ORM) pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA) and the 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 processing plant and associated equipment located in the NE<sup>1</sup>/<sub>4</sub> of the NE<sup>1</sup>/<sub>4</sub> of Section 20, Township 28 North, Range 58 East, in Roosevelt County, Montana. This facility is known as the Bainville Compressor Station. A complete list of the facility's permitted equipment can be found in Section I.A. of the Permit Analysis.

#### B. Current Permit Action

The Department of Environmental Quality (Department) received notification on June 18, 2012, from Bear Paw Energy, LLC requesting an amendment to MAQP #1546-05 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. Rule references and permit language were updated in this permit action.

### Section II: Limitations and Conditions

#### A. Emission Limitations:

1. Source #01, a 687 hp Waukesha 7042G natural gas compressor engine shall be operated with a Non-Selective Catalytic Reduction (NSCR) unit and an air/fuel ratio (AFR) controller. The engine speed shall not exceed 750 rpm of continuous duty operation. Emissions from this compressor engine shall not exceed the following limits (ARM 17.8.1204(3)(d)):

NO <sub>x</sub> <sup>1</sup>	19.0 lb/hr
CO	5.3 lb/hr
VOC	1.3 lb/hr

2. Source #02, a 687 hp Waukesha 7042G natural gas compressor engine, shall be operated with an NSCR unit and an AFR controller. The engine speed shall not exceed 750 rpm of continuous duty operation. Emissions from this compressor engine shall not exceed the following limits (ARM 17.8.752):

NO <sub>x</sub> <sup>1</sup>	3.03 lb/hr
CO	4.54 lb/hr
VOC	1.51 lb/hr

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<sup>1</sup> NO<sub>x</sub> reported as NO<sub>2</sub>

3. ORM shall not operate more than two 687 hp Waukesha 7042G natural gas compressor engines at any given time (17.8.749).
4. ORM shall operate all equipment to provide the maximum air pollution control for that the equipment was designed (17.8.752).
5. ORM shall operate the emergency flare only for equipment blowdown when shutdown is required for repair or for emergency use. This flare is not permitted to continuously flare sour gases (17.8.749).
6. 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 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
7. 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).
8. 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 in Section II.A.7 of the permit (17.8.749).

B. Testing Requirements:

1. ORM shall test Source #01 and Source #02 for NO<sub>x</sub> and CO, concurrently, and demonstrate compliance with the emission limits contained in Section II.A.1 and II.A.2, respectively. Source #01 and Source #2 were tested in January of 2001. Further testing for Source #01 and Source #02 shall occur on an every 4-year basis from the date the engines were last tested, or according to another testing/monitoring schedule as may be approved by the Department. Therefore, the next source testing is due in January of 2013 (ARM 17.8.105 and ARM 17.8.749).
2. During each test, ORM shall monitor the compressor engine intake manifold temperature and pressure, exhaust temperature, 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).
3. All source tests shall be conducted in accordance with 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. 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 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 units, as required by the Department. This information may be used for calculating operation fees based on actual emissions from the facility, and/or to verify compliance with the emission limitations (ARM 17.8.505).

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 annually certify, as required by ARM 17.8.1204(3)(b), that its actual emissions are less than those that would require the source to obtain an air quality Title V Operating Permit. The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted with the annual emission inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Monitoring and Record Keeping:

1. ORM shall operate and maintain an NSCR unit and an AFR controller on Source #01 and Source #02 within the parameters recommended by the equipment manufacturer.
2. ORM shall, at a minimum, inspect on Source #01 and Source #02: the AFR controller, the NSCR unit, and the catalyst in the unit once every 6 months, as well as after every upset condition that could have caused damage to the equipment. ORM shall conduct any subsequent maintenance to ensure that the control equipment and the catalyst will continue to perform as designed. If the catalyst fails to promote the chemical reactions required to reduce NO<sub>x</sub> and CO emissions to a level at or below the limits stated in Section II.A.1 and Section II.A.2, respectively, ORM shall replace it with a new catalyst capable of achieving these limits.
3. ORM shall keep a record of any and all inspections and maintenance conducted on the NSCR unit and the AFR controller on each compressor engine.

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  
Bainville Compressor Station  
MAQP #1546-06

I. Introduction/Process Description

A. Permitted Equipment:

The ONEOK Rockies Midstream, LLC. (ORM) Bainville Compressor Station is located in the NE¼ of the NE¼ of Section 20, Township 28 North, Range 58 East in Roosevelt County. The facility includes but is not limited to the following:

- (2) 687 horsepower (hp) Waukesha 7042G natural gas compressor engines (Source #01 and Source #02)
- (1) 1.2 MMBtu/hr glycol line heater
- (1) 90 MMBtu/hr emergency flare (4" diameter x 60' height)
- (1) fixed roof methanol tank
- (1) fixed roof condensate/water tank
- (1) fixed roof condensate tank

B. Source Description

The facility boosts sour field gas through the gas transmission system to a gas plant for processing. Because the pipeline natural gas is too sour to use as a fuel gas, both compressor engines and the glycol heater are fired on propane.

C. Permit History:

On December 8, 1980, the Department of Environmental Quality (Department) received a permit application from Phillips Petroleum to construct a gas compressor station near Bainville, Montana. The permit action permitted Source #01, a glycol line heater, a crude/water tank, a methanol tank, and an emergency flare. The permit was approved on February 23, 1981, and given **Permit #1546-00**. A Best Available Control Technology (BACT) analysis in Permit #1546-00 limited the emissions from Source #01. The Bainville Compressor Station was constructed by Phillips in 1981.

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

Prior to 1991, Koch had installed a 600 hp Caterpillar 398 compressor engine. However, this engine has subsequently been removed.

In May of 1991, Koch Hydrocarbon installed a 547 hp Waukesha compressor engine at the Bainville Compressor Station. This engine was relocated from the Charlie Creek Station. This engine has been removed from the Bainville site.

In October of 1991, Source #02 was relocated from Koch's Medicine Lake Compressor Station to the Bainville Compressor Station.

On August 19, 1992, Permit #1546-00 for the Bainville Compressor Station was revoked due to lack of payment of the annual operating fees.

On December 28, 1992, Permit #1546-00 for the Bainville Compressor Station was reinstated upon receipt of payment for the annual operating fees.

On February 29, 1996, **Permit #1546-01** was issued to include Source #02 that was relocated from the Medicine Lake Compressor Station to the Bainville Compressor Station. Koch was required to install BACT devices on this engine.

On March 11, 1996, the Department received an application from Koch for **Permit #1546-02** Koch requested a reduction in the oxides of nitrogen (NO<sub>x</sub>) emission limit with an offsetting increase in the carbon monoxide (CO) emission limit for Source #01. This reduction in NO<sub>x</sub> emissions was achieved by installing and operating a Non-Selective Catalytic Reduction (NSCR) unit and an air/fuel ratio (AFR) controller on the compressor engine. This action rendered the facility a synthetic minor source as defined under the Title V permitting program. Prior to issuing the Department Decision on this permit, Koch requested that Source #02 be removed from the permit. Operational changes in the area required less horsepower to be generated at the facility; therefore, this second engine was no longer needed at the site. On July 25, 1996, the Department issued Permit #1546-02 requiring Koch to permanently remove Source #02 from service by November 1, 1996.

On August 29, 1996, the Department received an application for **Permit #1546-03**. It requested that Source #02 be added back into the permit. NO<sub>x</sub> and CO emissions from this source are controlled by an NSCR unit and an AFR controller. This facility is a synthetic minor source and will be subject to the "Monitoring and Record Keeping" requirements in Section II.D of this permit. On October 19, 1996, the Department issued Permit #1546-03 placing Source #02 back into the permit.

On March 24, 1997, the Department received a request to modify Permit #1546-03. The modification reflected the fact that the Bainville Compressor Station had changed ownership. This modification transferred ownership of Permit #1546-03 from Koch Hydrocarbon Co. to Bear Paw Energy, Inc. **Permit #1546-04** replaced Permit #1546-03.

On July 30, 2001, Bear Paw submitted a request to modify Permit #1546-04. Bear Paw requested that the permit be written in a *de minimis* friendly manner by removing all equipment serial numbers. The permit action removed the equipment serial numbers and updated the permit format. In addition, a condition was added to specify that only two compressor engines may be operated at any given time. **Permit #1546-05** replaced Permit #1546-04.

D. Current Permitting Action:

The Department of Environmental Quality (Department) received notification on June 18, 2012, from Bear Paw Energy, LLC requesting an amendment to MAQP #1546-05 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. In addition, rule references and permit language were updated. The mailing address for ONEOK was also updated under this action. **MAQP #1546-06** replaces MAQP #1546-05.

E. Additional Information:

Additional information, such as applicable rules and regulations, BACT determinations, air quality impacts, and environmental assessments are 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 the 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 in 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, Sub-Chapter 2 - Ambient Air Quality, including, but not limited to:

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; and,
10. ARM 17.8.223 Ambient Air Quality Standard for PM<sub>10</sub>.

C. ARM 17.8, Sub-Chapter 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 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate. (2) Under this section, 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 17.8.322 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. To comply with this requirement, ORM will fire each compressor engine and the line heater on propane because the pipeline natural gas contains 7% H<sub>2</sub>S and is too sour to use as fuel.
4. ARM 17.8.340 Standard of Performance for New Stationary Sources. The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, shall comply with the standards and provisions of 40 CFR Part 60.  
  
40 CFR 60, Subpart KKK Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants. Owners or operators of onshore natural gas processing plants, as defined and applied in 40 CFR Part 60, shall comply with standards and provisions of 40 CFR Part 60, Subpart KKK. This subpart does not apply to the ORM Bainville facility because it does not meet the definition of a natural gas processing plant as defined in 40 CFR Part 60, Subpart KKK.
5. 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 ORM Bainville Compressor Station is not a National Emission Standards for Hazardous Air Pollutants (NESHAP) affected source because the facility does not have a glycol dehydration unit.

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 ORM Bainville Compressor Station is not a NESHAP affected source because the facility does not have a glycol dehydration unit.

D. ARM 17.8, Sub-Chapter 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 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 permit fee is not required for the current permit action because the permit action is considered an administrative change.
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. This 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 that pro-rate the required fee amount.

E. ARM 17.8, Sub-Chapter 7 - Permit, Construction and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year (TPY) of any pollutant. ORM has a PTE greater than 25 TPY of NO<sub>x</sub>, and 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, 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 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 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 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making decisions on those applications that require an environmental impact statement.
12. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or modified source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.
13. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

14. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
  15. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.
  16. ARM 17.8.770 Additional Requirements for Incinerators. This rule specifies the additional information that must be submitted to the Department for incineration facilities subject to 75-2-215 MCA.
- F. ARM 17.8, Sub-Chapter 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 because it is not listed and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).
- G. ARM 17.8, Sub-Chapter 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 greater than 100 tons/ year of any pollutant;
    - b. PTE greater than 10 tons/year of any one hazardous air pollutant (HAP), or PTE greater than 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
    - c. PTE greater than 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability.  
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 Permit #1546-06, the following conclusions were made:

- a. The facility's PTE is less than 100 ton/year for any pollutant.
- b. The facility's PTE is less than 10 ton/year of any one HAP and less than 25 ton/year of 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 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 the Bainville Compressor Station is a synthetic minor source of emissions as defined under Title V. Therefore, this facility is not subject to Title V Operating Permit requirements because federally enforceable limitations have been established that limit this source's potential to emit below the major source threshold.

- h. The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations that limit the source's potential to emit (ARM 17.8.1203(3)).
  - 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 the 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.

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.

The compliance certification submittal required by 17.8.1204(3)(a) shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this subchapter shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

### 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.

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 <sub>x</sub>	CO	VOC	SO <sub>x</sub>
#01 687 hp Waukesha 7042G Compressor Engine	0.0003	83.27	23.22	5.71	0.0000
#02 687 hp Waukesha 7042G Compressor Engine	0.0003	13.27	19.90	6.63	0.0000
#03 1.2 MMBtu/hr Glycol Line Heater	0.0000	0.00	0.00	0.00	0.0000
#04 90 MMBtu/hr Emergency Flare	0.0000	0.00	0.00		0.5288
Total	0.0006	96.54	43.12	12.34	0.5288

#### (SOURCE #01)

##### **687 hp Waukesha 7042G Compressor Engine**

Brake Horse Power: 687 bhp @ 750 rpm

Hours of Operation: 8,760 hr/yr

Max Fuel Combustion Rate: 7.75 MBtu/hp-hr \* 687 bhp = 5,324 MBtu/hr \* 1 MMBtu/1,000 MBtu = 5.324 MMBtu/hr

Fuel Heating Value: 677,000 Btu/SCF or 1.5 E-06 MMSCF/MMBtu {AP-42, Table from page A-4, 9/85 for Propane}

##### PM-10 Emissions

Emission Factor: 10.0 lb/MMSCF {FIRE - PC Version, 1/95, 2-02-002-02}  
 Calculations: 10.00 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 5.32 MMBtu/hr = 0.00008 lb/hr  
 0.00008 lb/hr \* 8,760 hr/yr \* 0.0005 tons/lb = 0.0003 ton/yr

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

Emission Factor: 12.55 gram/bhp-hr {Permit #1546-02 Limitation}  
 Calculations: 12.55 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 19.01 lb/hr  
 19.01 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 83.27 ton/yr

##### CO Emissions

Emission Factor: 3.50 gram/bhp-hr {Permit #1546-02 Limitation}  
 Calculations: 3.50 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 5.30 lb/hr  
 5.30 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 23.22 ton/yr

##### VOC Emissions

Emission Factor: 0.86 gram/bhp-hr {Permit #1546-02 Limitation}  
 Calculations: 0.86 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 1.30 lb/hr  
 1.30 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 5.71 ton/yr

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

Emission Factor: 0.60 lb/MMSCF {FIRE - PC Version, 1/95, 2-02-002-02}  
 Calculations: 0.60 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 5.32 MMBtu/hr = 0.000007 lb/hr  
 0.000007 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.00003 ton/yr

#### (SOURCE #02)

##### **687 hp Waukesha 7042G Compressor Engine**

Brake Horse Power: 687 bhp @ 750 rpm

Hours of Operation: 8,760 hr/yr

Max Fuel Combustion Rate: 7.75 MBtu/hp-hr \* 687 bhp = 5,324 MBtu/hr \* 1 MMBtu/1,000 MBtu = 5.324 MMBtu/hr

Fuel Heating Value: 677,000 Btu/SCF or 1.5 E-06 MMSCF/MMBtu {AP-42, Table from page A-4, 9/85 for Propane}

##### PM-10 Emissions

Emission Factor: 10.0 lb/MMSCF {FIRE - PC Version, 1/95, 2-02-002-02}  
 Calculations: 10.00 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 5.32 MMBtu/hr = 0.00008 lb/hr  
 0.00008 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.0003 ton/yr

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

Emission Factor: 2.00 gram/bhp-hr {BACT Determination}  
 Calculations: 2.00 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 3.03 lb/hr  
 3.03 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 13.27 ton/yr

CO Emissions

Emission Factor: 3.00 gram/bhp-hr {BACT Determination}  
Calculations: 3.00 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 4.54 lb/hr  
4.54 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 19.90 ton/yr

VOC Emissions

Emission Factor: 1.00 gram/bhp-hr {BACT Determination}  
Calculations: 1.00 gram/bhp-hr \* 687 bhp \* 0.002205 lb/gram = 1.51 lb/hr  
1.51 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 6.63 ton/yr

SO<sub>x</sub> Emissions

Emission Factor: 0.60 lb/MMSCF {FIRE - PC Version, 1/95, 2-02-002-02}  
Calculations: 0.60 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 5.32 MMBtu/hr = 0.000007 lb/hr  
0.000007 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.00003 ton/yr

**(SOURCE #03)**

**1.2 MMBtu/hr Glycol Line Heater**

Max Fuel Combustion Rate: 1.20 MMBtu/hr  
Hours of Operation: 8,760 hr/yr  
Fuel Heating Value: 677,000 Btu/SCF or 1.5 E-06 MMSCF/MMBtu {AP-42, Table from page A-4, 9/85 for Propane}

PM-10 Emissions

Emission Factor: 3.00 lb/MMSCF {FIRE, PC Version 1/95, 1-03-006-03}  
Calculations: 3.00 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 1.20 MMBtu/hr = 0.000005 lb/hr  
0.000005 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.000023 ton/yr

NO<sub>x</sub> Emissions

Emission Factor: 100 lb/MMSCF {FIRE, PC Version 1/95, 1-03-006-03}  
Calculations: 100 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 1.20 MMBtu/hr = 0.0002 lb/hr  
0.0002 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.0008 ton/yr

CO Emissions

Emission Factor: 20.0 lb/MMSCF {FIRE, PC Version 1/95, 1-03-006-03}  
Calculations: 20.0 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 1.20 MMBtu/hr = 0.00004 lb/hr  
0.00004 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.0002 ton/yr

VOC Emissions

Emission Factor: 5.3 lb/MMSCF {FIRE, PC Version 1/95, 1-03-006-03}  
Calculations: 5.3 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 1.20 MMBtu/hr = 0.00001 lb/hr  
0.00001 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.00004 ton/yr

SO<sub>x</sub> Emissions

Emission Factor: 0.60 lb/MMSCF {FIRE, PC Version 1/95, 1-03-006-03}  
Calculations: 0.60 lb/MMSCF \* 0.0000015 MMSCF/MMBtu \* 1.20 MMBtu/hr = 0.000001 lb/hr  
0.000001 lbs/hr \* 8,760 hr/yr \* 0.0005 tons/lb = 0.000005 tons/yr

**(SOURCE #04)**

**90 MMBtu/hr Emergency Flare**

Fuel Type: Sour Natural Gas with 7% H<sub>2</sub>S  
Fuel Heat Content: 1,000 Btu/SCF or 1.00E-03 SCF/Btu  
Flare Capacity: 90,000 SCF/hr or 0.09 MMSCF/hr  
Hours of Operation: 1 hr/yr

PM-10 Emissions

Emission Factor: neg. lb/MMSCF {AP-42 Table 11.5-1 7/93}  
Calculations: 0.00 lb/MMSCF \* 0.09 MMSCF/hr = 0.00 lb/hr = 0.00 ton/yr

NO<sub>x</sub> Emissions

Emission Factor: 0.07 lb/MMSCF {AP-42 Table 11.5-1 7/93}  
Calculations: 0.07 lb/MMSCF \* 0.09 MMSCF/hr = 0.006 lb/hr  
0.006 lb/hr \* 1 hr/yr \* 0.0005 ton/lb = 0.000003 ton/yr

CO Emissions

Emission Factor: 0.37 lb/MMSCF {AP-42 Table 11.5-1 7/93}  
Calculations: 0.37 lb/MMSCF \* 0.09 MMSCF/hr = 0.033 lb/hr  
0.033 lb/hr \* 1 hr/yr \* 0.0005 ton/lb = 0.00002 ton/yr

VOC Emissions

Emission Factor: 0.14 lb/MMSCF {AP-42 Table 11.5-1 7/93}  
Calculations: 0.14 lb/MMSCF \* 0.09 MMSCF/hr = 0.013 lb/hr  
0.013 lb/hr \* 1 hr/yr \* 0.0005 ton/lb = 0.000006 ton/yr

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

Assume: Ideal Gas with 7.0 mole% H<sub>2</sub>S in flared gas, and all H<sub>2</sub>S converted to SO<sub>x</sub>.

$$\begin{aligned} & 7.0 \% \text{ H}_2\text{S} \times \frac{1,000,000 \text{ ppm}}{100 \%} = 70,000 \text{ ppm H}_2\text{S} \times \frac{1 \text{ grain}/100 \text{ SCF}}{16 \text{ ppm}} \times \frac{1 \text{ lb}}{7,000 \text{ grains}} = \frac{0.6250 \text{ lbs H}_2\text{S}}{100 \text{ SCF}} \\ & \frac{0.6250 \text{ lb H}_2\text{S}}{100 \text{ SCF}} \times \frac{64.06 \text{ lb SO}_2 / \text{mole}}{32.08 \text{ lb H}_2\text{S} / \text{mole}} = \frac{1.175 \text{ lb SO}_2}{100 \text{ SCF}} \times \frac{1,000,000 \text{ SCF}}{1 \text{ MMSCF}} = \frac{11,750 \text{ lb SO}_2}{\text{MMSCF}} \\ \text{Calculations:} & \quad 11,750 \text{ lb/MMSCF} * 0.09 \text{ MMSCF/hr} = 1,058 \text{ lb/hr} \\ & \quad 1,058 \text{ lb/hr} * 1 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.5288 \text{ ton/yr} \end{aligned}$$

### V. Existing Air Quality

The facility is located in the NE¼ of the NE¼ of Section 20, Township 28 North, Range 58 East, in Roosevelt 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) for criteria pollutants.

### VI. Air Quality Impacts

The Department determined that there are no impacts from this administrative name change. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

### VII. Ambient Air Impact Analysis Air Quality Impacts

Based on the updates associated with the administrative actions incorporated into this permit and the allowable emissions added to the facility under the current permit action, the Department believes that the amount of controlled emissions generated by this project will not cause or contribute to a violation of any set ambient air quality standard.

VIII. Taking or Damaging Implication Analysis

As required by 2-10-101 through 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

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

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

IX. Environmental Assessment

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

MAQP Analysis Prepared by: Craig Henrikson  
Date: July 2, 2012