



January 2, 2020

Three Forks Resources, LLC  
Strawberry Creek Compressor Station  
4080 Youngfield St.  
Wheat Ridge, CO 80033

Montana Air Quality Permit #3898-02 is deemed final as of December 31, 2019, 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,

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

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

A handwritten signature in black ink that reads "Troy Burrows".

Troy Burrows  
Air Quality Scientist  
Air Quality Bureau  
(406) 444-1452

JM:TB  
Enclosure

Montana Department of Environmental Quality  
Air, Energy & Mining Division

Montana Air Quality Permit #3898-02

Three Forks Resources, LLC  
4080 Youngfield St  
Wheat Ridge, CO 80033

December 31, 2019



## AIR QUALITY PERMIT

Issued To: Three Forks Resources, LLC  
Strawberry Creek Compressor Station  
4080 Youngfield St.  
Wheat Ridge, CO 80033

Permit: #3898-02  
Administrative Amendment (AA)  
Request Received: 11/25/2019  
Department Decision on AA: 12/16/2019  
Permit Final: 12/31/2019

An air quality permit, with conditions, is hereby granted to Three Forks Resources, LLC (TFR), pursuant to Sections 75-2-204 and 211 of the Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

### SECTION I: Permitted Facilities

#### A. Plant Location

TFR operates natural gas compressor station and associated equipment located 17 miles northeast of Shelby, in the West 1/2 of the Southeast 1/4 of Section 29, Township 35 North, Range 3 East, in Toole County, Montana. A list of permitted equipment is included in Section I.A of the Permit Analysis.

#### B. Current Permit Action

On November 25, 2019, the Department of Environmental Quality (Department) received a letter from TFR requesting that the Department transfer the ownership of MAQP #3898-01 from Omimex Canada, Ltd. To Three Forks Resources, LLC.

### SECTION II: Conditions and Limitations

#### A. Emission Limitations

1. TFR shall not operate more than two natural gas compressor engines at any given time and the maximum rated design capacity of each engine shall not exceed 1289-brake horsepower (bhp) (ARM 17.8.749).
2. Emissions from any rich-burn natural gas compressor engine shall be controlled by the use of a non-selective catalytic reduction (NSCR) unit and an air-to-fuel ratio (AFR) controller. The pound per hour (lb/hr) emission limits for the engines shall be determined using the following equation and pollutant specific gram per brake horsepower-hour (g/bhp-hr) emission factors (ARM 17.8.752):

#### Equation

Emission Limit (lb/hr) = Emission Factor (g/bhp-hr) \* maximum rated design capacity of engine (bhp) \* 0.002205 pounds per gram (lb/g)

#### Emission Factors

Oxides of Nitrogen (NO <sub>x</sub> ):	1.0 g/bhp-hr
Carbon Monoxide (CO):	2.0 g/bhp-hr
Volatile Organic Compounds (VOC):	1.0 g/bhp-hr

3. Emissions from any lean-burn natural gas compressor engine shall be controlled by the use of an oxidation catalyst and an AFR controller. The lb/hr emission limits for the engines shall be determined using the following equation and pollutant specific g/bhp-hr emission factors (ARM 17.8.752):

Equation

Emission Limit (lb/hr) = Emission Factor (g/bhp-hr) \* maximum rated design capacity of engine (bhp) \* 0.002205 pounds per gram (lb/g)

Emission Factors

NO<sub>x</sub>: 1.0 g/bhp-hr  
CO: 0.5 g/bhp-hr  
VOC: 1.0 g/bhp-hr

4. TFR shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
5. TFR shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. TFR shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
7. TFR shall comply with the applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* (ARM 17.8.340 and 40 CFR 60, Subpart JJJJ).
8. TFR shall comply with the applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart HH, *National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities* (Arm 17.8.342 and 40 CFR 63, Subpart HH).
9. TFR shall comply with the applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 63, Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines* (Arm 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. Each compressor engine shall be tested and compliance demonstrated with the NO<sub>x</sub> and CO emission limits contained in either Section II.A.2 or II.A.3 (as applicable) of the permit within 180 days of initial start-up of each engine. After the initial source test, testing shall continue on an every 4-year basis or according

to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

2. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
3. The Department may require further testing (ARM 17.8.105).

#### C. Operational Reporting Requirements

1. TFR shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but is not limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used to calculate operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

2. TFR shall notify the Department of any construction or improvement project 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 startup 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(l)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by TFR as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

#### D. Notification

1. Within 15 days of the installation date of each compressor engine, TFR shall notify the Department of the actual installation date of each engine (ARM 17.8.749).
2. Within 15 days of the startup date of each compressor engine, TFR shall notify the Department of the actual startup date of each engine (ARM 17.8.749).

### SECTION III: General Conditions

- A. Inspection – TFR 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 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 TFR fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving TFR 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 TFR 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 Analysis  
Three Forks Resources, LLC  
MAQP #3898-02

I. Introduction/Process Description

Three Forks Resources, LLC (TFR) owns and operates a natural gas compressor station. The facility is located in the West ½ of the Southeast ¼ of Section 29, Township 35 North, Range 3 East, in Toole County, Montana, and is known as the Strawberry Creek Compressor Station.

A. Permitted Equipment

This facility includes the following permitted equipment:

- (2) 1,289-brake horsepower (bhp) Waukesha 7042GSI Compressor Engines
- (1) triethylene glycol (TEG) dehydration unit with a 1 million British thermal unit (MMBtu) per hour reboiler and associated 6 million standard cubic foot (scf) per day still vent
- (1) 2.21 MMBtu/hr heater

B. Source Description

The facility has two primary purposes. The first is to pump the field gas up to the required pressure in the natural gas transmission system. Compression of the gas is accomplished using the natural gas fired compressor engines described above.

The second purpose of the facility is to "dry" the gas as it is being processed. The gas contains moisture, which must be removed from the gas prior to being sent into the transmission system. This is accomplished with the dehydrator, also commonly called a reboiler or glycol unit. The gas is treated with a glycol solution, which absorbs the water in the gas stream. The glycol solution is then heated to about 300 degrees Fahrenheit (°F) to drive off the water and return the glycol. The water that is driven off is released to the atmosphere. The heat necessary for this activity is generated by burning natural gas in the dehydrator reboiler.

C. Permit History

On December 14, 2006 Omimex was issued **Permit #3898-00** for the operation of their compressor station and associated equipment located in the West ½ of the Southeast ¼ of Section 29, Township 35 North, Range 3 East, in Toole County, Montana. The station was identified as the Strawberry Creek Compressor Station.

A Best Available Control Technology (BACT) determination was conducted for each new or altered source. The Department of Environmental Quality (Department) determined that a pound per hour (lb/hr) emission limit equivalent to 1.0, 2.0 and 1.0 grams per break horsepower-hour (g/bhp-hr) for oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO) and volatile organic compounds (VOC), respectively, using a rich-burn engine equipped with non-selective catalytic reduction (NSCR) and air to fuel ratio (AFR) control was BACT for the two compressor engines. Similarly, the Department concluded that a lb/hr emission limit equivalent to 1.0, 0.5 and 1.0 g/bhp for NO<sub>x</sub>, CO and VOC, respectively, for a lean-

burn engine equipped with AFR was equivalent and applicable BACT for the two compressor engines. Both emission limitations were included in the permit to allow flexibility for facility operation. Finally, the Department determined that combustion of pipeline quality natural gas for reboiler operations and best management practices for the dehydration process constituted BACT for the dehydration unit, in this case.

On March 5, 2008, the Department received a permit modification application from Aspen Consulting and Engineering, Inc., on behalf of Omimex for Permit #3898-00. Omimex requested a permit modification to install turbocharger retrofit upgrades to the two 842 hp natural gas-fired Waukesha 7042G compressor engines making them each 1,289 hp engines. The post turbocharge upgrade compressor engine versions are known as Waukesha 7042 GSI.

This permit modification changed the permit conditions and limitations, and incorporated new and recently modified applicable Federal New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants, as applicable. **Permit # 3898-01** replaced Permit #3898-00.

#### D. Current Permit Action

On November 25, 2019, the Department received a letter from Three Forks Resources, LLC requesting that the Department update the listed owner on Permit #3898-01 to reflect a change of ownership. The current permitting action changes the ownership from Omimex Canada, Ltd. To Three Forks Resources, LLC (TFR) on Montana Air Quality Permit (MAQP) #3898-01 and updates the permit to reflect current permit language used by the Department. **MAQP # 3898-02** replaces Permit #3898-01.

## II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

### A. ARM 17.8, Subchapter 1 – General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this



chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

TFR 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>

TFR 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, TFR 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. TFR will burn 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 Part 60, Standards of Performance for New Stationary Sources (NSPS). The turbocharge retrofit at the Strawberry Creek facility is a physical change to the permitted equipment that results in an increase in emissions; therefore, the proposed change constitutes a modification as defined at 40 CFR 60, Subpart A. Accordingly, the NSPS 40 CFR 60, Subpart IIII, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* applies to modified sources pursuant to 40 CFR 60.4230(a)(5).
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. A major Hazardous Air Pollutant (HAP) source and affected area sources, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as applicable, including the following subparts:
  - 40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.
  - 40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities.
  - 40 CFR 63, Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines.

Based on the information submitted by TFR, the Strawberry Creek facility is not subject to the provisions of 40 CFR 63, Subparts HHH, because the facility is not a major source of HAPs. However, the Strawberry Creek facility has a glycol dehydration unit and reciprocating internal combustion engines, which are affected

area sources of HAPs under 40 CFR 63, Subparts HH and ZZZZ. Therefore, the Strawberry Creek facility is subject to 40 CFR 63, Subpart HH and Subpart ZZZZ, as applicable.

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. TFR was not required to submit a permit application fee for the current permit action as this is deemed an Administrative Amendment.
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. TFR has a PTE greater than 25 tons per year of NO<sub>x</sub>, CO, and VOC; 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 TFR was not required to submit an application for the current permit action because the change is considered administrative. (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. An affidavit of publication of public notice was not required for the current permit action because the permit change is considered an administrative permit change.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving TFR 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 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. (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 MAQP #3898-02 for TFR, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.

- d. This facility is subject to the NSPS at 40 CFR 60 Subpart IIII; however, in accordance with 40 CFR 60.4230(c) it is not subject to the Title V Operating Permit program solely on that basis.
- e. This facility is subject to current NESHAP 40 CFR 63, Subparts HH and ZZZZ; however, in accordance with 40 CFR 63.1270(e) and 6585(d), respectively, it is not subject to the Title V Operating Permit program solely on that basis.
- 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 TFR 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. TFR 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 determination was not required for the current permit action because the permit change is considered an administrative permit change.

#### IV. Emission Inventory

Source	Tons/year					
	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>	HCHO
1,289-bhp Waukesha Compressor Engine	0.00	12.45	12.45	24.90	0.025	0.93
1,289-bhp Waukesha Compressor Engine	0.00	12.45	12.45	24.90	0.025	0.93
Dehydration Unit						
- Still Vent			1.43			1.00
- 1.0 MMBtu/hr Reboiler	0.03	0.44	0.02	0.37	0.00	0.00
2.21 MMBtu/hr heater	0.07	0.97	0.05	0.81	0.01	0.00
Total	0.11	26.31	26.40	50.98	0.06	2.86

#### 1,289-bhp Waukesha Compressor Engines (2 Engines)

Brake Horsepower: 1,289 hp  
Hours of operation: 8,760 hr/yr

##### PM<sub>10</sub> Emissions

Emission Factor: 9.91E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 8/00)  
Fuel Consumption: 9.83 MMBtu/hr (Manufacturer's Data)  
Calculations: 9.83 MMBtu/hr \* 7.71E-05 lb/MMBtu = 0.00076 lb/hr  
0.00076 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.003 ton/yr

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

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations: 1.00 gram/bhp-hour \* 1,289 hp \* 0.002205 lbs/gram = 2.84 lb/hr  
2.84 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 12.45 ton/yr

##### VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)  
Calculations: 1.00 gram/bhp-hour \* 1,289 hp \* 0.002205 lbs/gram = 2.84 lb/hr  
2.84 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 12.45 ton/yr

##### CO Emissions

Emission factor: 2.00 gram/bhp-hour (BACT Determination)  
Calculations: 2.00 gram/bhp-hour \* 1,289 hp \* 0.002205 lb/gram = 5.68 lb/hr  
5.68 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 24.90 ton/yr

##### SO<sub>x</sub> Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-2, 8/00)  
Fuel Consumption: 9.83 MMBtu/hr (Manufacturer's Data)  
Calculations: 9.83 MMBtu/hr \* 5.88E-04 lb/MMBtu = 0.0058 lb/hr  
0.0058 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.025 ton/yr

##### HCHO Emissions

Emission factor: 0.075 gram/bhp-hour (Manufacturer's Data)  
Calculations: 0.075 gram/bhp-hour \* 1,289 hp \* 0.002205 lb/gram = 0.21 lb/hr  
0.21 lb/hr \* 8,760 hr/yr \* 0.0005 ton/lb = 0.93 ton/yr

## TEG Regenerator Still Vent

The following emission summary has been estimated using the GRI-GLYCalc program. For the detailed input parameters refer to the permit application.

### Regenerator Still Vent

Glycol Type: TEG  
Annual Hours of Operation: 8760  
Dry Gas Flow Rate: 6.0 MMScf/day (maximum)

<u>Regenerator Emissions</u>	<u>lb/hr ton/yr</u>	
Total VOC Emissions	0.33	1.43
Total HAP Emissions	0.23	1.00

## Dehydrator Reboiler

Fuel Consumption:  $1.0 \text{ MMBtu/hr} * 0.001 \text{ MMScf/MMBtu} * 8760 \text{ hr/yr} = 8.76 \text{ MMscf/yr}$   
Hours of operation: 8,760 hr/yr

### PM<sub>10</sub> Emissions

Emission Factor: 7.60 lb/MMScf (AP-42, 1.4-2, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $7.60 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.03 \text{ ton/yr}$

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

Emission Factor: 100.00 lb/MMScf (AP-42, 1.4-1, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $100.00 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.44 \text{ ton/yr}$

### VOC Emissions

Emission Factor: 5.50 lb/MMScf (AP-42, 1.4-2, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $5.50 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

### CO Emissions

Emission Factor: 84.00 lb/MMScf (AP-42, 1.4-1, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $84.00 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.37 \text{ ton/yr}$

### SO<sub>x</sub> Emission

Emission Factor: 0.60 lb/MMScf (AP-42, 1.4-2, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $0.60 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.003 \text{ ton/yr}$

### HCHO Emissions

Emission factor: 7.50E-02 lb/MMScf (AP-42, 1.4-3, 7/98)  
Fuel Consumption: 8.76 MMScf/yr  
Calculations:  $7.50\text{E-}02 \text{ lb/MMScf} * 8.76 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.0003 \text{ ton/yr}$



## 2.21 MMBtu/hr Heater

Fuel Consumption:  $2.21 \text{ MMBtu/hr} * 0.001 \text{ MMScf/MMBtu} * 8760 \text{ hr/yr} = 19.36 \text{ MMScf/yr}$

Hours of operation: 8,760 hr/yr

### PM<sub>10</sub> Emissions

Emission Factor: 7.60 lb/MMScf (AP-42, 1.4-2, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $7.60 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.07 \text{ ton/yr}$

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

Emission Factor: 100.00 lb/MMScf (AP-42, 1.4-1, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $100.00 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.97 \text{ ton/yr}$

### VOC Emissions

Emission Factor: 5.50 lb/MMScf (AP-42, 1.4-2, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $5.50 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.05 \text{ ton/yr}$

### CO Emissions

Emission Factor: 84.00 lb/MMScf (AP-42, 1.4-1, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $84.00 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.81 \text{ ton/yr}$

### SO<sub>x</sub> Emission

Emission Factor: 0.60 lb/MMScf (AP-42, 1.4-2, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $0.60 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

### HCHO Emissions

Emission factor: 7.50E-02 lb/MMScf (AP-42, 1.4-3, 7/98)

Fuel Consumption: 19.36 MMScf/yr

Calculations:  $7.50\text{E-}02 \text{ lb/MMScf} * 19.36 \text{ MMScf/yr} * 0.0005 \text{ ton/lb} = 0.0003 \text{ ton/yr}$

## V. Existing Air Quality

The surrounding area is considered attainment/unclassified for the Montana and National Ambient Air Quality Standards (MAAQS and NAAQS).

## VI. Ambient Air Impact Analysis

The Department determined, based on the relatively small size of the facility and the corresponding emissions, that the impacts from this permitting action will be minor. The Department believes the proposed project will not cause or contribute to a violation of any ambient air quality standard.

## VII. Taking or Damaging Implication Analysis

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

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)

## VIII. Environmental Assessment

The current permit action is an Administrative Action; therefore, an Environmental Assessment is not required.

Analysis Prepared By: Troy Burrows

Date: December 11, 2019