



**Montana Department of  
ENVIRONMENTAL QUALITY**

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June 27, 2014

Ross Whelchel, P.E.  
Operations Engineer  
Northwestern Energy  
40 E. Broadway  
Butte, MT 59701

Dear Mr. Whelchel:

Montana Air Quality Permit #2756-06 is deemed final as of June 27, 2014, by the Department of Environmental Quality (Department). This permit is for Utopia Field Station 035 a natural gas compressor station. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

Julie Merkel  
Air Permitting Supervisor  
Air Resources Management Bureau  
(406) 444-3626

Deanne Fischer, P.E.  
Environmental Engineer  
Air Resources Management Bureau  
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JM:DF  
Enclosure

Montana Department of Environmental Quality  
Permitting and Compliance Division

Montana Air Quality Permit #2756-06

NorthWestern Energy  
Utopia Field Station 035  
40 East Broadway  
Butte, Montana 59701

June 27, 2014



## MONTANA AIR QUALITY PERMIT

Issued To: NorthWestern Energy  
Utopia Field Station 035  
40 East Broadway  
Butte, Montana 59701

MAQP #2756-06  
Administrative Amendment (AA)  
Request Received: 05/27/2014  
Department Decision on AA: 06/11/2014  
Permit Final: 06/27/2014  
AFS #: 051-0002

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to NorthWestern Energy (NWE), 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:

NorthWestern Energy (NWE) owns and operates a natural gas compressor station and associated equipment located in the Northwest 1/4 of the Southwest 1/4 of Section 14, Township 33 North, Range 4 East, in Liberty County, Montana. This facility is known as the Utopia Field Station 035. The facility is located approximately 32 miles east of Shelby and about 10 miles north of Lothair. A complete listing of the permitted equipment can be found in the permit analysis.

#### B. Current Permit Action:

On May 27, 2014, the Department of Environmental Quality (Department) received an administrative amendment request from NWE for MAQP #2756-05. NWE requested that MAQP # 2756-06 be written in a de minimis fashion by more accurately identifying the existing natural gas compressor engine as an 'up to 650 horsepower (hp) compressor engine'

The current permit action is an administrative amendment pursuant to ARM 17.8.764 and accurately specifies the size of the existing natural gas compressor engine as up to 650 hp. In addition to accounting for clarification of the existing equipment, the permit updates the rule references and permit format.

### Section II: Conditions and Limitations

#### A. Emission Limitations

1. Emissions from the up to 650-hp compressor engine (site de-rated to 600 hp) shall be controlled with the use of a Non-Selective Catalytic Reduction (NSCR) unit and an electronic air/fuel ratio (AFR) controller. Emissions from the engine shall not exceed the following (ARM 17.8.752):

Oxides of Nitrogen (NO <sub>x</sub> )	2.64 pound per hour (lb/hr)
Carbon Monoxide (CO)	3.96 lb/hr
Volatile Organic Compounds (VOC)	1.32 lb/hr

2. NWE shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
3. NWE 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).
4. NWE 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).
5. NWE shall treat all unpaved portions of the access roads, parking lots, and general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.4 (ARM 17.8.749).
6. NWE shall comply with all applicable standards and limitations, and the reporting, recordkeeping and notification requirements contained in 40 CFR 63, Subpart ZZZZ (ARM 17.8.340 and 40 CFR 63, Subpart ZZZZ).

#### B. Testing Requirements

1. NWE shall test the up to 650-hp compressor engine for NO<sub>x</sub> and CO, concurrently, to demonstrate compliance with the NO<sub>x</sub> and CO emission limits contained in Section II.A.1. 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 ARM 17.8.710).
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 of Environmental Quality (Department) may require further testing (ARM 17.8.105)

#### C. Operational Reporting Requirements

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

3. NWE 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***, a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. 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(1)(d) (ARM 17.8.745).
4. All records compiled in accordance with this permit must be maintained by NWE 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).

### Section III: General Conditions

- A. Inspection – NWE shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment (continuous emissions monitoring system (CEMS) or continuous emissions 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 NWE fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving NWE 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 therefor, 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 Fees - Pursuant to Section 75-2-220, MCA, failure to pay the an annual operation fee by NWE 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  
NorthWestern Energy  
Utopia Field, Station 035  
MAQP #2756-06

I. Introduction/Process Description

A. Permitted Equipment

NorthWestern Energy (NWE) owns and operates a natural gas compressor station that is known as the Utopia Field Station 035. The facility includes the following equipment:

1. (1) up to 650-horsepower (hp) compressor engine;
2. (1) 0.12-million British thermal unit per hour (MMBtu/hr) heater; and
3. (1) 0.015-MMBtu/hr heater.

B. Source Description

The NWE facility is located in the Northwest 1/4 of the Southwest 1/4 of Section 14, Township 33 North, Range 4 East in Liberty County, Montana. The facility pumps 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 described above. An engine heater and an auxiliary building heater provide heat to the various station facilities.

C. Permit History

On June 22, 1993, Montana Power Company (MPC) was issued **MAQP #2756-00** for the operation of their compressor station and associated equipment, located in the Northwest 1/4 of the Southwest 1/4 of Section 14, Township 33 North, Range 4 East, in Liberty County, east of Shelby, Montana. The station was identified as the Utopia Field Station 035-1. The 240-Hp Ingersoll Rand compressor engine was installed in 1966 and the 600-Hp White Superior compressor engine was installed in 1983.

Since the 240-Hp Ingersoll Rand compressor engine was an existing source (it was operating at the same location prior to March 16, 1979), a Best Available Control Technology (BACT) determination was not required for the engine. For the 600-Hp White Superior compressor engine, BACT was determined to be a Non-Selective Catalytic Reduction (NSCR) Unit with an electronic Air to Fuel Ratio (AFR) controller.

The Latoka 0.25-MMBtu/hour dehydrator (reboiler) and the heaters at the Utopia Field Station 035-1 & 2 were minor sources. Based on previous determinations, BACT for these sources was determined to be no control.

On March 15, 1994, MAQP #2756-01 was issued to MPC. The permit revised the emission limitation units from grams per brake horsepower-hour (grams/bhp-hr) to pounds per hour (lb/hr). The revision provided for operational flexibility to account for varying parameters such as engine revolutions per minute (RPM), operating load (bhp), ambient air temperature, gas temperature, site, elevation, fuel gas quality, AFR, field gas conditions, etc. Also, to clarify oxides of nitrogen (NO<sub>x</sub>) mass emission calculations, NO<sub>x</sub> emission limitations were identified as Nitrogen Dioxide (NO<sub>2</sub>). In 1993, the 600-Hp White Superior compressor

engine was disconnected from service and mothballed on site. Furthermore, MPC requested that the 600-Hp White Superior compressor engine be removed from the permit. **MAQP #2756-01** replaced MAQP #2756-00.

On March 17, 1999, MAQP #2756-02 was issued to Montana Power Gas Company (MPGC). The permit action changed the name of the facility from MPC to MPGC. The references to the company name in the permit were updated to reflect the change. In addition, the rule references were updated, and the permit was updated to reflect the current format used for writing permits. **MAQP #2756-02** replaced MAQP #2756-01.

On January 10, 2001, MAQP #2756-03 was issued to MPC. The permit action added a 600-Hp White Superior compressor engine to the Utopia Station. This engine was originally installed at Utopia in 1983 under MAQP #2756-00 and removed by request in 1993 in MAQP #2756-01. MPGC also requested a facility name change from MPGC back to MPC. **MAQP #2756-03** replaced MAQP #2756-02.

On May 31, 2001, the MPC notified the Department of Environmental Quality (Department) of a pending merger of MPC with and into Montana Power Company, LLC (MPC-LLC). Due to indications that the facility might change its name again, the Department decided to wait to change the name on the permit. On October 15, 2002, the Department received a request to change the permit from MPC-LLC to NorthWestern Corporation (NorthWestern). This permit action updated the permit name to NorthWestern.

Further, in a letter received by the Department on September 16, 2002, NorthWestern notified the Department that NorthWestern had sold the natural gas gathering portion of the Utopia Field Station 035 to EnCana Energy Resources, Inc. (EnCana). NorthWestern requested that the 240- Hp Ingersoll Rand compressor engine, the 0.25 MMBtu/hr Lakota dehydrator, and the two 0.08 MMBtu/hr Little Giant heaters be removed from NorthWestern's permit. Furthermore, NorthWestern also requested that the Autocraft heater be correctly identified as a 0.015 MMBtu/hr heater.

This permit action modified the permit to reflect the name change from MPC to NorthWestern. In addition, the 240-Hp Ingersoll Rand compressor engine, the 0.25 MMBtu/hr Lakota dehydrator, and the two 0.08 MMBtu per hour Little Giant heaters were removed from the permit and the Autocraft heater was correctly identified as 0.015 MMBtu/hr. **MAQP #2756-04** replaced MAQP #2756-03.

On February 7, 2008, the Department received an administrative amendment request from NWE for MAQP #2756-04. NWE requested a name change from NorthWestern to NWE. The permit action was an administrative amendment pursuant to ARM 17.8.764 and changed the permittee name from NorthWestern to NWE. In addition, rule references were updated to reflect current rule references. **MAQP #2756-05** replaced MAQP #2756-04.

#### D. Current Permit Action

On May 27, 2014, the Department received an administrative amendment request from NWE for MAQP #2756-05. NWE requested that MAQP # 2756-06 be changed to more accurately identify the existing natural gas compressor engine as an 'up to 650 horsepower (hp) compressor engine'. The existing engine has always been a 650 hp engine, but had mistakenly been listed as a 600 hp engine in previous versions of the permit.

The current permit action is an administrative amendment pursuant to ARM 17.8.764 and accurately specifies the size of the existing natural gas compressor engine as up to 650 hp. In addition to accounting for clarification of the existing equipment, the permit updates the rule references and permit format. **MAQP #2756-06** replaces MAQP #2756-05

#### E. Additional Information

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

### II. Applicable Rules and Regulations

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

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

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>
11. ARM 17.8.230 Fluoride in Forage

NWE 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. (2) Under this rule, NWE 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. NWE will consume pipeline-quality natural gas in the fuel burning equipment, which will meet this limitation.
6. 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). NWE is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
  - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below:
  - b. 40 CFR 60, Subpart KKK - Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011 applies to affected facilities in onshore natural gas processing plants including the group of all equipment except compressors within a process unit. This facility is not an NSPS-affected source because it does not meet the definition of a natural gas processing plant as defined in 40 CFR Part 60, Subpart KKK.
  - c. 40 CFR 60, Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines contains NSPS requirements that apply to owners or operators of stationary spark ignition (SI) internal combustion engine (ICE) that commence construction, modification, or reconstruction after June 12, 2006, where the stationary ICE is manufactured after July 1, 2007, for engines greater than 500 bhp, or after January 1, 2008, for engines less than 500 bhp. This NSPS will apply if the engine remains or will remain at the permitted location for more than 12 months, or a shorter period of time for an engine located at a seasonal source. A seasonal source remains at a single location on a permanent basis (at least 2 years) and operates three months or more each year.

Because the natural gas SI ICE engine was manufactured before July 1, 2007, this NSPS does not currently apply. However, because the permit is written in a de minimis-friendly manner, the NSPS could apply to future engines.

7. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The owner or operator of any affected source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63.
  - a. 40 CFR 63, Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HH. In determining whether NWE's facility was a 40 CFR Part 63, Subpart HH affected source, the Department compared the facility to larger facilities permitted in Montana.

The Department made determinations that several of the larger facilities in Montana do not meet the definition of a major source of HAP as defined in 40 CFR Part 63, Subpart HH. Based upon the previous determinations and the size of NWE's facility, 40 CFR Part 63, Subpart HH would not apply to the NWE facility because it would not be a major source of HAPs. In addition, the NWE facility does not utilize a dehydration unit, therefore would not be subject to the area source provisions of 40 CFR 63, Subpart HH.

- b. 40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in 40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In determining whether NWE's facility was a 40 CFR Part 63, Subpart HHH affected source, the Department compared the facility to larger facilities permitted in Montana. The Department made determinations that several of the larger facilities in Montana do not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HHH. Based upon the previous determinations and the size of NWE's facility, 40 CFR Part 63, Subpart HHH would not apply to the NWE facility because it would not be a major source of HAPs.
- c. 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines. An owner or operator of a stationary reciprocating internal combustion engine (RICE) at a major or area source of HAP emissions is subject to this rule except if the stationary RICE is being tested at a stationary RICE test cell/stand. An area source of HAP emissions is a source that is not a major source. NWE is operating a stationary RICE at an area source of HAP emissions; therefore, Subpart ZZZZ applies.

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. NWE was not required to submit a permit application fee for the current permit action because it is an administrative action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, (excluding an open burning permit) issued by the Department. 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 modification to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year (TPY) of any pollutant. NWE has the PTE more than 25 TPY of NO<sub>x</sub> and CO; therefore, a 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. NWE was not required to submit a permit application for the current permit action because this permit action is an administrative amendment. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. NWE was not required to notify the public of the current permit action because this permit action is an administrative amendment.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.
8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving NWE 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 17.8.762 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.

11. 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 requirements 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).
12. 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.
13. 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 Federal Clean Air Act (FCAA) that it would emit, except as this subchapter would otherwise allow.

The NWE Utopia Station is not a major stationary source because it is not listed and does not have the potential to emit more than 250 tons per year of any regulated air pollutant. This determination included emissions from NWE's Utopia Station. Future PSD applicability determinations may also include emissions from NWE's Utopia Station.

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 stationary source having:
  - a. PTE > 100 tons/year of any pollutant;

- b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or a 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 MAQP #2756-06 for NWE, 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 of any one HAP and less than 25 tons/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 subject to a current NESHAP standards (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.

Based on these facts, the Department determined that the NWE Utopia Station will be a minor source of emissions as defined under Title V. This determination included emissions from NWE's Utopia Station. Future Title V applicability determinations may also include emissions from NWE's Utopia Station.

### III. BACT Determination

A BACT determination is required for each new or modified source. NWE shall install on the new or modified source the maximum air pollution control capability, which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT analysis was not required for the current permit action because the current permit action is considered an administrative permit action.

### IV. Emission Inventory

Emission Unit	PM	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
Compressor Engine	0.22	0.22	0.01	11.56	5.78	17.34
Heaters (2)	0.00	0.00	0.06	0.01	0.01	
<b>Totals</b>	<b>0.22</b>	<b>0.22</b>	<b>0.01</b>	<b>11.62</b>	<b>5.79</b>	<b>17.35</b>

#### Compressor Engine (up to 650 hp, site de-rated to 600 hp)

Brake Horsepower: 600 bhp

Hours of operation: 8,760 hr/yr

**PM Emissions**

Emission Factor: 10 lb/1.0E06 natural gas {2-02-002-02, AFSSCC pg 32}  
 Control Efficiency: 0.0%  
 Fuel Consumption: 8,500 Btu/Hp-hr {Maximum Design}  
 Calculations:  $8,500 \text{ Btu/Hp-hr} * 0.001 \text{ ft}^3/\text{Btu} * 600 \text{ hp} * 8,760 \text{ hr/yr} = 44,676,000 \text{ ft}^3/\text{yr}$   
 $44,676,000 \text{ ft}^3/\text{yr} * 10 \text{ lb/1.0E06 ft}^3 \text{ gas} * 1 \text{ ton/2,000 lb} = 0.22 \text{ ton/yr}$

**PM<sub>10</sub> Emissions**

Emission Factor: 10 lb/1.0E06 {2-02-002-02, AFSSCC pg 32}  
 Control Efficiency: 0.0%  
 Fuel Consumption: 8,500 Btu/Hp-hr {Maximum Design}  
 Calculations:  $8,500 \text{ Btu/Hp-hr} * 0.001 \text{ ft}^3/\text{Btu} * 600 \text{ hp} * 8,760 \text{ hr/yr} = 44,676,000 \text{ ft}^3/\text{yr}$   
 $44,676,000 \text{ ft}^3/\text{yr} * 10 \text{ lb/1.0E06 ft}^3 \text{ gas} * 1 \text{ ton/2,000 lb} = 0.22 \text{ ton/yr}$

**NO<sub>x</sub> Emissions**

Emission factor: 2.0 gram/bhp-hour {BACT analysis}  
 Calculations:  $2.0 \text{ gram/bhp-hour} * 600 \text{ bhp} * 1 \text{ lb/454 grams} = 2.64 \text{ lb/hr}$   
 $2.64 \text{ lb/hr} * 8,760 \text{ hr/yr} * 1 \text{ ton/2,000 lb} = 11.56 \text{ ton/yr}$

**VOC Emissions**

Emission factor: 1.0 gram/bhp-hour {BACT analysis}  
 Calculations:  $1.0 \text{ gram/bhp-hour} * 600 \text{ bhp} * 1 \text{ lb/454 grams} = 1.32 \text{ lb/hr}$   
 $1.32 \text{ lb/hr} * 8,760 \text{ hr/yr} * 1 \text{ ton/2,000 lb} = 5.78 \text{ ton/yr}$

**CO Emissions**

Emission factor: 3.0 gram/bhp-hour {BACT analysis}  
 Calculations:  $3.0 \text{ gram/bhp-hour} * 600 \text{ bhp} * 1 \text{ lb/454 grams} = 3.96 \text{ lb/hr}$   
 $3.96 \text{ lb/hr} * 8,760.0 \text{ hr/yr} * 1 \text{ ton/2,000 lb} = 17.34 \text{ ton/yr}$

**SO<sub>2</sub> Emissions**

Emission factor: 0.002 gram/hp-hr {AP-42, Table 3.2-1}  
 Calculations:  $0.002 \text{ gram/hp-hr} * 600 \text{ bhp} * 0.0022 \text{ lb/gram} * 8,760 \text{ hr/yr} * 1 \text{ ton/2,000 lb} = 0.01 \text{ tons/yr}$

**Heaters (2)**

Fuel Consumption: 135.00 MBtu/hr {Information from Company}  
 Hours of operation: 8,760 hr/yr

**PM Emissions**

Emission Factor: 5 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-1}  
 Control Efficiency: 0.0%  
 Calculations:  $135.00 \text{ MBtu/hr} * 1,000 \text{ Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760 \text{ hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 5 \text{ lb/1.0E06 ft}^3 \text{ natural gas} * 1 \text{ ton/2,000 lb} = 0.003 \text{ ton/yr}$

**PM<sub>10</sub> Emissions**

Emission Factor: 5 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-1}  
 Control Efficiency: 0.0%  
 Calculations:  $135.00 \text{ MBtu/hr} * 1,000 \text{ Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760 \text{ hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 5 \text{ lb/1.0E06 ft}^3 \text{ natural gas} * 1 \text{ ton/2,000 lb} = 0.003 \text{ ton/yr}$

**NO<sub>x</sub> Emissions**

Emission Factor: 100 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-2}  
 Control Efficiency: 0.0%  
 Calculations:  $135.00 \text{ MBtu/hr} * 1,000 \text{ Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760 \text{ hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 100 \text{ lb/1.0E06 ft}^3 \text{ natural gas} * 1 \text{ ton/2,000 lb} = 0.06 \text{ ton/yr}$

**VOC Emissions**

Emission Factor: 8 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-1}

Control Efficiency: 0.0%  
Calculations:  $135.00\text{MBtu/hr} * 1,000\text{Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760\text{hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 8 \text{ lb}/1.0\text{E}06 \text{ ft}^3 \text{ natural gas} * 1 \text{ ton}/2,000 \text{ lb} = 0.005 \text{ ton/yr}$

#### **CO Emissions**

Emission Factor: 20 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-2}  
Control Efficiency: 0.0%  
Calculations:  $135.00\text{MBtu/hr} * 1,000\text{Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760\text{hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 20 \text{ lb}/1.0\text{E}06 \text{ ft}^3 \text{ natural gas} * 1 \text{ ton}/2,000 \text{ lb} = 0.01 \text{ ton/yr}$

#### **SO2 Emissions**

Emission Factor: 0.6 lb/1.0E06 ft<sup>3</sup> {AP-42, Table 1.4-2}  
Control Efficiency: 0.0%  
Calculations:  $135.00\text{MBtu/hr} * 1,000\text{Btu/Mbtu} * 0.001 \text{ ft}^3/\text{Btu} * 8,760\text{hr/yr} = 1,182,600 \text{ ft}^3/\text{yr}$   
 $1,182,600 \text{ ft}^3/\text{yr} * 0.6 \text{ lb}/1.0\text{E}06 \text{ ft}^3 \text{ natural gas} * 1 \text{ ton}/2,000 \text{ lb} = 0.000 \text{ ton/yr}$

## V. Existing Air Quality

The NWE facility is located in the Northwest ¼ of the Southwest ¼ of Section 14, Township 33 North, Range 4 East, in Liberty County, Montana. Liberty County is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants.

## VI. Ambient Air Impact Analysis

NWE (as MPC) previously conducted ambient air quality modeling using EPA guideline models (ISC2 and COMPLEX) for all of the compressor stations in and near Glacier, Toole, Liberty, and Pondera Counties. The meteorological data used in the models was collected at the Great Falls Airport National Weather Service station. The modeling originally submitted for MAQP #2756-00 at Utopia Field Station 035 assumed annual emissions of approximately 124.6 tons of NO<sub>x</sub> and 124.6 tons of CO. The current permit action does not increase emissions from the facility and the potential emissions from the facility are less than the emissions assumed for the modeling exercise. In addition, emission controls for this station would further reduce the impacts of this facility. Therefore, the modeling analysis conducted for MAQP #2756-00 still demonstrates that this facility will not cause a violation or exceedance of any state or federal ambient air quality standard.

## VII. Taking or Damaging Implication Analysis

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

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the 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. Environmental Assessment

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

Analysis Prepared By: Deanne Fischer  
Date: June 2, 2014