DEQ
Montana Department
of Environmental Quality

January 4, 2017

Beth Stimatz
CSP
11 East Park Street
Butte, MT 59701

Dear Ms. Stimatz:

Montana Air Quality Permit #2782-08 is deemed final as of January 4, 2017, by the Department of Environmental Quality (Department). This permit is for a Natural Gas Processing Facility. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

John P. Proulx
Environmental Science Specialist
Air Quality Bureau
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JM:JP
Enclosure

Montana Department of Environmental Quality
Air, Energy, and Mining Division

Montana Air Quality Permit #2827-08

NorthWestern Energy
Telstad Field Station
11 East Park Street
Butte, MT 59701

January 4, 2017

MONTANA AIR QUALITY PERMIT

Issued To: NorthWestern Energy
Telstad Field Station
40 East Broadway Street
Butte, MT 59701

MAQP #2782-08
Application Complete: 10/13/2016
Preliminary Determination Issued: 11/16/2016
Department's Decision Issued: 12/16/2016
Permit Final: 01/04/2017
State ID: 101-0008

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to NorthWestern Energy (NWE) pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended, for the following:

Section I: Permitted Facilities

A. Plant Location

NWE operates a natural gas processing plant and associated equipment located in the NE¼ of the NE¼ of Section 34, Township 32 North, Range 1 East, in Toole County, Montana. The facility is known as the Telstad Field Station. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On October 13, 2016, the Department of Environmental Quality (Department) received a request from NWE to modify MAQP #2782 to make existing and proposed emission reductions at the Telstad Field Station federally enforceable with the intent of reducing emissions below the Title V major source threshold. The emissions reductions include removal of the following units from the MAQP:

- Two (2) 300-horsepower (hp) Ingersoll Rand XVG 4-stroke rich burn compressor engines
- One (1) AJAX DPC-160 hp 2-stroke rich burn compressor engine

In addition, both of the existing AJAX DPC-600 hp 2-stroke compressor engines will have GE Clean Burn technology installed, effectively changing them from rich burn to lean burn compressor engines. This change would reduce oxides of nitrogen (NO_x) emissions while still maintaining compliance with the current Best Available Control Technology (BACT) limits for carbon monoxide (CO) and volatile organic compounds (VOC). NWE requested an updated and more stringent NO_x limitation to incorporate the reductions achieved by the added control technology.

Lastly, the hours of operation for the two Solar Saturn 1100-hp turbine-driven compressor engines will be further restricted. MAQP 2782 previously required a total combined hours of operation limit for both Solar Saturns of 10,400 hours per rolling 12-month period. The two Solar Saturns do not operate simultaneously; therefore, NWE is requesting an annual limit to reflect operating only one engine at a time.

The new combined number of allowable operating hours is 5,000 hours per rolling 12-month period. In addition, the every 4 year emissions testing requirement for these turbines has been reestablished in the MAQP since the facility would no longer be subject to the Title V Operating Permit program's portable analyzer emissions testing schedule for natural gas compressor stations once the facility withdraws from that program.

Section II: Limitations and Conditions

A. Emission Limitations

1. Emissions from each of the two 600 bhp Ajax DPC-600 compressor engines (unit #4 and unit #5) shall not exceed the following:

Oxides of Nitrogen (NO_x)[1]	6.54 Pounds per hour (lb/hr) (ARM 17.8.1204)
Carbon Monoxide (CO)	1.46 lb/hr (ARM 17.8.752)
Volatile Organic Compounds (VOC)	0.66 lb/hr (ARM 17.8.752)

2. Emissions from each of the two 1100 bhp Solar Saturn turbine compressor engines (unit #11 and unit #12) shall not exceed the following (ARM 17.8.749):

NO_x[1]	7.11 lb/hr
CO	11.57 lb/hr
VOC	1.66 lb/hr

3. The total combined hours of operation of the two 1,100 bhp Solar Saturn turbine compressor engines shall be limited to 5,000 hours during any rolling 12-month period (ARM 17.8.749).

4. 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).

5. 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).

6. 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).

[1] NO_x reported as NO_2.

7. 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.7 (ARM 17.8.749).

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

B. Testing Requirements

1. Each of the two 600 bhp Ajax DPC-600 compressor engines (unit #4 and unit #5) shall be initially tested for NO_x and CO, concurrently, and then every 4 years thereafter (or according to another testing/monitoring schedule as may be approved by the Department), to demonstrate compliance with emissions limits in Section II.A.1. The initial source test shall be conducted within 180 days of the startup date of each unit following the completion of the installation of the GE Clean Burn technology (ARM 17.8.105 and 17.8.749).

2. Each of the two 1100 bhp Solar Saturn compressor turbines (unit #11 and unit #12) shall be tested for NO_x and CO, concurrently, on an every 4 year basis or according to another testing/monitoring schedule as may approved by the Department, to demonstrate compliance with the emission limits in Section II.A.2. The initial test shall occur no more than 4 years from the date of the latest emissions test performed for compliance with the facility's Title V Operating Permit (ARM 17.8.105 and 17.8.749).

3. All compliance 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 testing (ARM 17.8.105).

C. Operational Reporting Requirement:

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 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. NWE shall document, by month, the total hours of operation of the two 1,100 bhp Solar Saturn turbine compressor engines. By the 25th day of each month, NWE shall total the combined hours of operation for the two 1,100 bhp Solar Saturn turbine compressor engines for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.3. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

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***, 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(l)(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).

5. NWE shall annually certify that its emissions are less than those that would require the source to obtain an air quality operating permit as required by ARM 17.8.1204(3)(b). The annual certification shall comply with the certification requirements of ARM 17.8.1207. The annual certification shall be submitted along with the annual emissions inventory information (ARM 17.8.749 and ARM 17.8.1204).

D. Notification

NWE shall provide the Department with written notification of the actual startup date of each of the Ajax DPC-600 compressor engines following the completion of the installation activities for the GE Smart Burn technology.

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 or surveys, collecting samples, obtaining data, auditing any monitoring equipment (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 NWE fails to appeal as indicated below.

C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving the 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 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 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
Telstad Field Station
MAQP #2782-08

I. Introduction/Process Description

A. Permitted Equipment

NorthWestern Energy (NWE) owns and operates a natural gas compressor station and associated equipment located in the NE¼ of the NE¼ of Section 34, Township 32 North, Range 1 East, Toole County, Montana. The facility is known as the Telstad Field Station and includes, but is not limited to, the following equipment:

- (2) 600 bhp Ajax DPC-600 compressor engines;
- (1) 400 thousand British thermal unit per hour (MMBtu/hr) Olman Heath dehydrator reboiler;
- (2) 1100 bhp Solar Saturn turbine compressor engines;
- (1) 750 MMBtu/hr Lochnivar heating boiler;
- (2) 190 bhp Waukesha natural gas emergency/backup generators; and
- Miscellaneous natural gas building heaters.

B. Source Description

The purpose of the facility is to boost the field gas to the natural gas transmission system. This initial compression of the gas is accomplished with the compressor engines and turbines described in Section I.A of the Permit Analysis. The heaters provide heat to the various station facilities.

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

C. Permit History

The 300 bhp Ingersoll Rand XVG compressor engines were installed at the Montana Power Company (MPC) Telstad compressor station in 1948, the Clark RA-8 compressor engine was installed in 1967, the 600 bhp Ajax DPC-600 compressor engines were installed in 1977, and the 160 bhp Ajax DPC-160 compressor engine was installed in July 1979.

On September 23, 1993, MPC was issued **MAQP #2782-00** for the operation of their natural gas processing plant and associated equipment. The 160 bhp Ajax DPC-160 compressor engine was installed in July 1979.

Therefore, a Best Available Control Technology (BACT) analysis was required for the 160 bhp Ajax DPC-160 compressor engine. Based on the BACT analysis, the Department of Environmental Quality (Department) determined BACT to be the proper operation of the 160 bhp Ajax DPC - 160 compressor engine to maintain compliance with the NO_x, CO, and VOC emission limitations. The heaters and the reboilers at the Telstad Field Station are considered minor sources. Based on previous determinations, BACT for these sources was determined to be no control.

On May 16, 1994, MAQP #2782-01 was issued for an alteration that was requested by MPC -Telstad. This alteration was requested because the Department revised the emission limitation units from gram per brake horsepower-hour (g/bhp-hr) to pound per hour (lb/hr). The revision was due to varying parameters such as engine revolutions per minute (RPM), operating load (bhp), ambient air temperature, gas temperature, site elevation, fuel gas quality, air/fuel ratio (AFR), field gas conditions, etc. Rather than limit the engines to a g/bhp-hr limit, an hourly emission limit was allowed for operational flexibility.

In addition, MPC requested an alteration to their initial permit for the 160 bhp Ajax DPC-160. MPC requested to change the oxides of nitrogen (NO_x) emission limit from a 3.0 g/bhp-hr basis to 11.0 g/bhp-hr basis. In addition, MPC requested to change the carbon monoxide (CO) emission limit from 2.5 g/bhp-hr basis to 11.0 g/bhp-hr basis. A test conducted October 12, 1993, showed that MPC could not meet the initial NO_x and CO limitations. The Department agreed with MPC's request to increase the allowable emissions. The initial limitation was based on erroneous manufacturer data.

Also, as part of the permit alteration for MAQP #2782-01, the NO_x emission limitations were identified as NO_2, and the heaters were calculated at the next 1 million British thermal unit per hour (MMBtu/hr) increment. **MAQP #2782-01** replaced MAQP #2782-00.

On September 30, 1998, MPC requested a permit modification to MAQP #2782-01. The request involved removing the testing requirement for the 160 bhp Ajax DPC-160 compressor engine. Based on the emissions and past testing results from this source, the Department agreed that an every 4-year testing schedule was not necessary for the engine at that time; however, the limit remained and testing may be required in the future. This permit modification was consistent with other compressor stations and the Department's testing guidance. Rule references were also updated. **MAQP #2782-02** replaced MAQP #2782-01.

On October 4, 2001, MAQP #2782-03 was issued to MPC. MPC requested that MAQP #2782-02 be altered to facilitate the installation and operation of two 1100 bhp Solar Saturn turbine compressor engines and one 750 MMBtu/hr heating boiler. In addition, MPC requested the removal of the 3000 MMBtu/hr Sweetening Plant Reboiler, the 250 MMBtu/hr Reclaimer Reboiler, the Sweetening Plant Flare, and the Sweetening Plant Dehydrator. The permit included a restriction on the hours of operation for the two Solar Saturn turbine compressor engines to a combined total of 10,400 hours per year. The limit allowed the facility to remain below the Prevention of Significant Deterioration (PSD) significance threshold value for NO_x. **MAQP #2782-03** replaced MAQP #2782-02.

On October 18, 2002, the Department received a request to administratively amend MAQP #2782-03 to incorporate a name change from MPC to NorthWestern Corporation (NorthWestern). MAQP #2782-04 incorporated the name change into the permit. **MAQP #2782-04** replaced Permit #2782-03.

On October 30, 2003, the Department received an administrative amendment request from NorthWestern for MAQP #2782-04. NorthWestern requested that the every 4-year testing requirements for each of the two 1100 bhp Solar Saturn turbine compressor engines be removed from the permit because NorthWestern's Title V Operating Permit OP#2782-03, issued as final on August 25, 2003, required semi-annual testing on each of the turbines.

MAQP #2782-05 removed the every 4-year testing requirements for each of the turbine compressor engines from the permit. In addition, the permit format, language, and rule references were updated to reflect the Department's current permit format, language, and rule references. **MAQP #2782-05** replaced MAQP #2782-04.

On February 7, 2008, the Department received an administrative amendment request from NWE for MAQP #2782-05. NWE requested a name change from NorthWestern to NWE. This action was an administrative amendment pursuant to Administrative Rules of Montana (ARM) 17.8.764 and changed the permittee name from NorthWestern to NWE. In addition, a typographic error in the facility name was corrected from Telstad Field Station to Telestad Field Station. **MAQP #2782-06** replaced MAQP #2782-05.

On January 22, 2010, the Department received an administrative amendment request from NWE to amend MAQP #2782-06. NWE requested the Department to correct the name of the facility from Telestad Field Station to Telstad Field Station. In addition, NWE also requested removal of the 800 bhp Clark compressor engine from the permitted equipment list because the compressor engine had been removed from service.

This permit action is an administrative amendment pursuant to ARM 17.8.764 and corrected the facility name for the Telstad Field Station. In addition, the 800 bhp Clark compressor engine was removed from the permitted equipment list and the emissions inventory contained in the permit analysis was updated. **MAQP #2782-07** replaced MAQP #2786-06.

D. Current Permit Action

On October 13, 2016, the Department received a request from NWE to modify MAQP #2782-07 to make existing and proposed emission reductions at the Telstad Field Station federally enforceable with the intent of reducing emissions below the Title V major source threshold. The emissions reductions include removal of the following units from the MAQP:

- Two (2) 300-horsepower (hp) Ingersoll Rand XVG 4-stroke rich burn compressor engines
- One (1) AJAX DPC-160 hp 2-stroke rich burn compressor engine

In addition, both of the existing AJAX DPC-600 hp 2-stroke compressor engines will have GE Clean Burn technology installed, effectively changing them from rich burn to lean burn compressor engines. This change would reduce oxides of nitrogen (NO_x) emissions while still maintaining compliance with the current Best Available Control Technology (BACT) limits for carbon monoxide (CO) and volatile organic compounds (VOC). NWE requested an updated and more stringent NO_x limitation to incorporate the reductions achieved by the added control technology.

Lastly, the hours of operation of the Solar Saturn 1100-hp turbine-driven compressor engines will be further restricted. The MAQP previously required a total combined hours of operation limit for both Solar Saturns of 10,400 hours per rolling 12-month period. The two Solar Saturns do not operate simultaneously; therefore, NWE requested an annual limit to reflect operating only one engine at a time. The new combined number of allowable operating hours is 5,000 hours per rolling 12-month period. In addition, the every 4 years emissions testing requirement for these turbines has been reestablished in the MAQP since the facility would no longer be subject to the Title V Operating Permit program's portable analyzer emissions testing schedule for natural gas compressor stations once the facility withdraws from that program.

The current permit action addresses these requests and updates permit language and rule references used by the Department and updates the emissions inventory. **MAQP #2782-08** replaces MAQP #2786-07.

E. Response to Public Comments

Person/Group Commenting	Permit Reference	Comment	Department Response
Bison Engineering, Inc.	Section II.A.1, MAQP	In the permit modification application submitted for this action, NorthWestern requested an oxides of nitrogen (NOx) limit of 6.54 pounds per hour (lb/hr) for each of the two 600 bhp Ajax DPC-600 compressor engines based on manufacturer's information. The limit included in the permit is 6.5 lb/hr. NorthWestern requests that the limit be corrected to 6.54 as originally submitted.	The Department has made the requested change in Section II.A.1 of the MAQP.
Bison Engineering, Inc.	Section II.B.2, MAQP	The first sentence states, "Each of the two 110 bhp Solar Saturn… or according to another testing/monitoring	The Department has made the requested change in Section II.B.2 of the MAQP

		schedule *as **my be*** approved by the Department... " NorthWestern requests that the bold italicized statement be corrected to state, "as may be..."	
Bison Engineering, Inc.	Section II.G.2, MAQP Analysis	The description in the PD of MAQP #2782-08 for the Title V Operating Permit applicability section includes only the change in the two 600 bhp Ajax DPC-600 compressor engines. NorthWestern requests that the description also acknowledge the equipment that was removed'.	The Department has made the requested change in Section II.G.2 of the MAQP Analysis

F. Additional Information

Additional information, such as applicable rules and regulations, BACT determinations, 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 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 emissions of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary, using methods approved by the Department.

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 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 that a public nuisance is created.

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

1. ARM 17.8.204 Ambient Air Monitoring
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_{10}
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. (1) This rule requires that no person may cause or authorize emissions to be discharged to the outdoor atmosphere from any source installed on or before November 23, 1968, that exhibit an opacity of 40% or greater averaged over 6 consecutive minutes. (2) This rule requires that no person may cause or authorize emissions to be discharged to 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 by 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 compressor engines and reboilers, which meets 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 a tank is equipped with a vapor loss control device as described in (1) of this rule, or is a pressure tank as described in (1) of this rule.

7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). The NWE - Telstad compressor station, is not an NSPS affected source because it does not meet the definition of a natural gas processing plant as defined in 40 CFR 60, Subpart KKK.

8. ARM 17.8.342 ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR Part 63, shall comply with the requirements of 40 CFR Part 63, as listed below:

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

    b. 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 applicable provisions of 40 CFR 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR 63, Subpart HH requirements, certain criteria must be met.
First the facility must be a major or area source of hazardous air pollutants (HAPs) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be either a major or area source for HAPs must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR 63, Subpart HH. Based on information submitted by NWE, the Telstad facility has triethylene glycol (TEG) dehydration units which are considered an affected area source of HAPs. Therefore the Telstad facility is subject to 40 CFR 63, Subpart HH, as applicable.

c. 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 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR 63, Subpart HHH requirements, certain criteria must be met. First the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. In addition, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR 63, Subpart HHH. Second, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR 63, Subpart HHH. Based on the information submitted by NWE, the Telstad facility is not subject to the provisions of 40 CFR 63 Subpart HHH because the facility is not a major source of HAPs.

d. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants (HAPs) for Stationary Reciprocating Internal Combustion Engines (RICE). 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. Based on the information submitted by NWE, the RICE equipment used under MAQP #2782-08 are subject to this subpart because the Telstad Station is considered an area source of HAPs and NWE operates RICE engines that are considered affected units.

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 submitted the appropriate permit application fee for the current permit action.

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

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, as described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate 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, modify, or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. NWE has the PTE more than 25 tons per year of NO_x, 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, modification, or use of a source. NWE submitted the required application for the current 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. NWE submitted an affidavit of publication of public notice for the October 7, 2016 issue of *The Great Ralls Tribune*, a newspaper of general circulation in the Town of Shelby in Toole County, as proof of compliance with the public notice requirements.

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 statue, 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 permit 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 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).

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.

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 because 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 stationary source having:

   a. PTE greater than 100 tons/year of any pollutant.

   b. PTE greater than 10 tons/year of any one HAP, 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_{10}) in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2782-08 for NWE, the following conclusions were made.

   a. The facility's PTE is less than 100 tons/year for all pollutants.

   b. The facility's PTE is less than 10 tons/year of any individual HAP and less than 25 tons/year of a combination of all HAPs.

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

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

   e. This facility is subject to the area source provisions of 40 CFR 63, Subpart HH and 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.

NWE voluntarily installed add-on pollution control technology (GE Smart Burn controls) on the two Ajax DPC-600 compressor engines to reduce potential NO_x emissions and requested federally-enforceable permit limitations to reflect this additional control. NWE also voluntarily removed Two (2) 300-horsepower (hp) Ingersoll Rand XVG 4-stroke rich burn compressor engines and One (1) AJAX DPC-160 hp 2-stroke rich burn compressor engine. These NO_x emission limitations reduce facility emissions to minor source levels with respect to Title V. Based on these limitations, the Department determined that this facility is not subject to the Title V Operating Permit Program. However, in the event that the EPA makes minor sources that are subject to MACT obtain a Title V Operating Permit, this source will be subject to the Title V Operating Permit Program.

h. ARM 17.8.1204(3). The Department may exempt a source from the requirement to obtain an air quality operating permit by establishing federally enforceable limitations which limit that source's PTE.

i. In applying for an exemption under this section the owner or operator of the facility shall certify to the Department that the source's PTE does not require the source to obtain an air quality operating permit.

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

3. ARM 17.8.1207 Certification of Truth, Accuracy, and Completeness. The compliance certification submittal required by ARM 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 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 two Ajax DCP-600 compressor engines are not being modified by this permit action; therefore, the previous BACT analysis remains valid and NWE in not installing any new emitting sources to the facility. The installation of the GE Smart Burn add on controls is being done voluntarily by NWE and not as a result of a BACT analysis or any other federal or Montana Clean Air Act authority.

IV. Emission Inventory

Tons/Year						
	PM	**PM_{10}**	**SO_2**	**NO_x**	**VOC**	**CO**
600 bhp Ajax DPC–600 compressor engine	0.22	0.22	0.01	28.65	2.89	6.39
600 bhp Ajax DPC–600 compressor engine	0.22	0.22	0.01	28.65	2.89	6.39
400 MMBtu/hr Olman Heath dehydrator reboiler	0.01	0.01	0.00	0.17	0.01	0.03
1100 bhp Solar Saturn compressor turbines (2 turbines limited to 5000 combined) hours)	0.23	0.23	0.01	17.78	4.15	28.93
Natural gas building heaters	0.02	0.02	0.00	0.43	0.04	0.09
750 MBtu/hr Lochnivar heating boiler	0.02	0.02	0.00	0.32	0.02	0.06
(2) 190 bhp Waukesha natural gas-fired emergency/backup generator(s)	0.00	0.00	0.00	1.15	0.46	0.15
TOTAL	0.72	0.72	0.03	77.15	10.46	42.04

600 bhp Ajax DPC-600 Compressor Engines (2 Engines)

Brake Horsepower: 600 bhp
Hours of Operation: 8760 hr/yr

PM / PM10 Emissions
Emission Factor: 10 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 8500 Btu/bhp-hr (Maximum Design – MAQP #2782-02)
Calculations: 10 lb/MMSCF * 8500 Btu/bhp-hr * 1 SCF/1020 Btu * 600 bhp * 8760 hr/yr * 0.0005 ton/lb = 0.22 ton/yr

NO_X Emissions
Emission factor: 6.54 lb/hr (Permit Limit)
Calculations: 6.54 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 28.7 ton/yr

VOC Emissions
Emission factor: 0.66 lb/hr (Permit Limit)
Calculations: 0.66 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 2.89 lb/hr

CO Emissions
Emission factor: 1.46 lb/hr (Permit Limit)
Calculations: 1.46 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 6.39 lb/hr

SO_2 Emission
Emission factor: 0.002 g/bhp-hr(MAQP # 2782-02)
Calculations: 0.002 g/bhp * 600 bhp * 0.002205 lb/g * 8760 hr/yr * 0.0005 ton/lb = 0.01 lb/hr

400 MMBtu/hr Olman Heath dehydrator reboiler

Hours of Operation: 8760 hr/yr

PM / PM10 Emissions
Emission Factor: 5 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 400 MMBtu/hr (Information from Company – MAQP #2782-02)
Calculations: 5 lb/MMSCF * 400 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

NO_X Emissions
Emission Factor: 100 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 400 MMBtu/hr (Information from Company – MAQP #2782-02)
Calculations: 100 lb/MMSCF * 400 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.17 ton/yr
VOC Emissions
Emission Factor: 8 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 400 MMBtu/hr (Information from Company – MAQP #2782-02)
Calculations: 8 lb/MMSCF * 400 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.01 ton/yr

CO Emissions
Emission Factor: 20 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 400 MMBtu/hr (Information from Company – MAQP #2782-02)
Calculations: 20 lb/MMSCF * 400 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.03 ton/yr

SO_2 Emission
Emission Factor: 0.6 lb/MMSCF(MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 400 MMBtu/hr (Information from Company – MAQP #2782-02)
Calculations: 0.6 lb/MMSCF * 400 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

1100 bhp Solar Saturn Compressor Turbines (2 turbines)

Brake Horsepower: 1100 bhp each
Hours of Operation: 5,000 hr/yr (**RESTRICTION**: combined total of 5,000 operating hours per year)

PM / PM10 Emissions
Emission Factor: 10 lb/MMSCF (use same factor as MAQP #2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 8500 Btu/bhp-hr (Maximum Design – MAQP #2782-02)
Calculations: 10 lb/10^6 SCF * 8500 Btu/bhp-hr * 1 SCF/1020 Btu * 1100 bhp * 5,000 hr/yr * 0.0005 ton/lb = 0.23 ton/yr

NO_X Emissions
Emission factor: 7.11 lb/hr (Permit Limit)
Calculations: 7.11 lb/hr * 5,000 hr/yr * 0.0005 ton/lb = 17.78 ton/yr

VOC Emissions
Emission factor: 1.66 lb/hr (Permit Limit)
Calculations: 1.66 lb/hr * 5,000 hr/yr * 0.0005 ton/lb = 4.15 ton/yr

CO Emissions
Emission factor: 11.57 lb/hr (Permit Limit)
Calculations: 11.57 lb/hr * 5,000 hr/yr * 0.0005 ton/lb = 28.93 ton/yr

SO_2 Emission
Emission factor: 0.002 g/bhp-hr (use same factor as MAQP #2782-02)
Calculations: 0.002 g/bhp * 1100 bhp * 0.002205 lb/g * 5,000 hr/yr * 0.0005 ton/lb = 0.012 ton/yr

Natural Gas Building Heaters (up to 1 MMBtu/hr)

Hours of Operation: 8760 hr/yr

PM / PM10 Emissions
Emission Factor: 5 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 1 MMBtu/hr
Calculations: 5 lb/MMSCF * 1 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.02 ton/yr

NO_X Emissions
Emission Factor: 100 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 1 MMBtu/hr
Calculations: 100 lb/MMSCF * 1 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.43 ton/yr

VOC Emissions
Emission Factor: 8 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 1 MMBtu/hr
Calculations: 8 lb/MMSCF * 1 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.03 ton/yr

CO Emissions
Emission Factor: 20 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 1 MMBtu/hr
Calculations: 20 lb/MMSCF * 1 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.09 ton/yr

SO_2 Emission
Emission Factor: 0.6 lb/MMSCF(MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 1 MMBtu/hr
Calculations: 0.6 lb/MMSCF * 1 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

750 MMBtu/hr Lochnivar Heating Boiler
Hours of Operation: 8760 hr/yr

PM / PM10 Emissions
Emission Factor: 5 lb/MMSCF (use same emission factors as MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 750 MMBtu/hr
Calculations: 5 lb/MMSCF * 750 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.02 ton/yr

NO_X Emissions
Emission Factor: 100 lb/MMSCF (use same emission factors as MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 750 MMBtu/hr
Calculations: 100 lb/MMSCF * 750 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.32 ton/yr

VOC Emissions
Emission Factor: 8 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 750 MMBtu/hr
Calculations: 8 lb/MMSCF * 750 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.02 ton/yr

CO Emissions
Emission Factor: 20 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 750 MMBtu/hr
Calculations: 20 lb/MMSCF * 750 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.06 ton/yr

SO_2 Emission
Emission Factor: 0.6 lb/MMSCF(use same emission factors as MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 750 MMBtu/hr
Calculations: 0.6 lb/MMSCF * 750 MMBtu/hr * 1 SCF/1020 Btu * 8760 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

190 bhp Waukesha natural gas-fired emergency/backup generator/engine(s)
Brake Horsepower: 190 bhp
Hours of Operation: 500 hr/yr

PM / PM10 Emissions
Emission Factor: 10 lb/MMSCF (MAQP # 2782-02)
Control Efficiency: 0.0%
Fuel Consumption: 8500 Btu/bhp-hr (Maximum Design – MAQP #2782-02)
Calculations: 10 lb/10^6 SCF * 8500 Btu/bhp-hr * 1 SCF/1020 Btu * 190 bhp * 500 hr/yr * 0.0005 ton/lb = 0.00 ton/yr

NO_X Emissions
Emission factor: 11.00 g/bhp-hr (MAQP # 2782-02)
Calculations: 11.00 g/bhp * 190 bhp * 0.002205 lb/g * 500 hr/yr * 0.0005 ton/lb = 1.15 lb/hr

VOC Emissions
Emission factor: 4.40 g/bhp-hr (MAQP # 2782-02)
Calculations: 4.40 g/bhp * 190 bhp * 0.002205 lb/g * 500 hr/yr * 0.0005 ton/lb = 0.46 lb/hr

CO Emissions
Emission factor: 1.40 g/bhp-hr (MAQP # 2782-02)
Calculations: 1.40 g/bhp * 190 bhp * 0.002205 lb/g *500 hr/yr * 0.0005 ton/lb = 0.15 lb/hr

SO_2 Emission
Emission factor: 0.002 g/bhp-hr (MAQP # 2782-02)
Calculations: 0.002 g/bhp * 190 bhp * 0.002205 lb/g * 500 hr/yr * 0.0005 ton/lb = 0.00 lb/hr

V. Existing Air Quality and Monitoring Requirements

The existing air quality of the area is expected to be in compliance with all state and federal requirements. NWE (as MPC) previously conducted ambient air quality modeling for all compressor stations in and near Glacier, Toole, Liberty, and Pondera Counties using two EPA guideline models, ISC2 and COMPLEX. The meteorological data that was used was taken from the Great Falls Airport National Weather Service station. The modeling that was submitted conservatively assumed that approximately 455.0 tons per year of NO_x and 455.0 tons per year of CO would be emitted. This modeling did not show violations of the annual or hourly ambient standards. The modeling analysis demonstrated that this facility would not cause a violation or exceedance of any state or federal ambient standard. In addition, because the current NO_x and CO emissions are below the NO_x and CO emissions assumed for the modeling, the Department expects the facility to continue to operate in compliance with all applicable ambient air quality standards.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 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?
		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.

VII. Environmental Assessment

The current permit action will result in a decrease of emissions from the facility. An Environmental Assessment is attached.

Analysis Prepared by: John Proulx
Date: October 31, 2016

DEPARTMENT OF ENVIRONMENTAL QUALITY
Air, Energy, & Mining Division
Air Quality Bureau
P.O. Box 200901, Helena, MT 59620
(406) 444-3490

DRAFT ENVIRONMENTAL ASSESSMENT (EA)

Issued To: NorthWestern Energy – Telstad Field Station
11 East Park
Butte, MT 59701

Montana Air Quality Permit number (MAQP): 2782-08

Preliminary Determination Issued: November 16, 2016
Department Decision Issued: December 16, 2016
Permit Final: January 4, 2017

1. *Legal Description of Site*: NE¼ of the NE¼ of Section 34, Township 32 North, Range 1 East, in Toole County, Montana

2. *Description of Project*: NorthWestern Energy (NWE) is proposing to remove two (2) 300 horsepower (hp) Ingersoll Rand Compressor engines and one (1) AJAX DPC-160 hp Compressor. NWE is also proposing to install GE Clean Burn controls on two existing (2) AJAX DPC-600 hp Compressor engines in order to reduce maximum potential emissions of oxides of nitrogen (NO_x) and make these emissions reductions federally enforceable via reduced NO_x emission limits. Allowable hours of operation for two (2) Solar Saturn 1100 hp compressor turbines would also be reduced in order to further reduce facility emission levels. These changes would ultimately reduce facility emissions to less than major source levels, allowing the Telstad facility to withdraw from the Title V Operating Permit program.

3. *Objectives of Project*: The objectives of the proposed project are to reduce NO_X emissions to less than Title V threshold levels.

4. *Alternatives Considered*: In addition to the proposed action, the Department also considered the "no-action" alternative. The no action alternative would mean that NWE would continue to operate the Telstad Facility at current operational capacities with no credit given for the reduction in pollutants emitted from the facility. Because the emissions reductions are being done voluntarily, NWE could elect to discontinue the use of the add-on emission controls at any time and negate the environmental benefit that they provide. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A list of enforceable conditions, including a BACT analysis, would be included in MAQP #2782-08.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development.

The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do not unduly restrict private property rights.

7. *The following section summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.*

SUMMARY OF COMMENTS ON POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS: The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats – there would be no impacts to terrestrial and aquatic life, or habitats with associated with the proposed project.

B. Water Quality, Quantity and Distribution – there would be no impacts to water quality, quantity, or distribution associated with the proposed project.

C. Geology and Soil Quality, Stability and Moisture – there would be no impacts to the geology and soil quality, stability, and moisture associated with the proposed project.

D. Vegetation Cover, Quantity, and Quality - there would be no impacts to the vegetative cover, quantity, and quality associated with the proposed project.

E. Aesthetics - there would be no impacts to the aesthetics associated with the proposed project.

F. Air Quality – with the proposed project, air quality would be improved with the reduction of 204 tons per year (tpy) of NO_X, 27 tpy of volatile organic compounds (VOC), and 26 tpy of carbon monoxide (CO).

G. Unique Endangered, Fragile, or Limited Environmental Resources – The Department contacted the Montana Natural Heritage Program in order to conduct an investigation of unique, endangered, fragile, or limited environmental resources for the project location and identified 2 species of concern. The Ferruginous Hawk and the Chestnut-collared Longspur.

As discussed in Section VI of the permit analysis, emissions from the facility would be greatly reduced, providing cleaner air for the immediately surrounding areas. Overall, any impact to the unique endangered, fragile, or limited environmental resource of the proposed project area would be expected to be negligible.

H. Sage Grouse Executive Order – the Department recognizes the site location in not within Greater Sage Grouse Habitat Area as defined by Executive Order No. 12-2015

I. Demands on Environmental Resource of Water, Air and Energy - there would be no impacts for the demand on Environmental Resources of water, air, and energy associated with the proposed project.

J. Historical and Archaeological Sites – the site is located on a previously developed area. The proposed project would not disturb any new areas within the facility boundaries therefor, no impacts are anticipated with the proposed project.

K. Cumulative and Secondary Impacts – There would be no cumulative and secondary impacts associated with the proposed project other than the reduction of criteria pollutants associated with compressor engines.

8. The following section summarizes the potential economic and social effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

SUMMARY OF COMMENTS ON POTENTIAL ECONOMIC AND SOCIAL EFFECTS: The following comments have been prepared by the Department.

A. Social Structures and Mores – there would be no impacts to any social structures or mores associated with the proposed project.

B. Cultural Uniqueness and Diversity – there would be no impacts to cultural uniqueness and diversity associated with the proposed project.

C. Local and State Tax Base and Tax Revenue – there would be no impacts to local and state tax base and tax revenue associated with the proposed project.

D. Agricultural or Industrial Production – there would be no impacts to agricultural or industrial production associated with the proposed project.

E. Human Health – with the proposed project, human health would be improved with the reduction of 204 tpy of NO_X, 27 tpy of VOC, and 26 tpy of CO.

F. Access to and Quality of Recreational and Wilderness Activities – there would be no impacts to access or quality of recreational and wilderness activities associated with the proposed project.

G. Quantity and Distribution of Employment – there would be not impacts to the quantity or distribution of employment associated with the proposed project.

H. Distribution of Population – there would be no impacts to the distribution of population associated with the proposed project.

I. Demands for Government Services – there would be only minor impacts to demands for government services through periodic compliance inspections.

J. Industrial and Commercial Activity – there would be minor impacts to industrial and commercial activity associated with proposed removal of equipment and installation of new technology.

K. Locally Adopted Environmental Plans and Goals – the Department is unaware of any locally adopted environmental plans and goals.

L. Cumulative and Secondary Impacts - There would be no cumulative and secondary impacts associated with the proposed project other than the reduction of criteria pollutants associated with compressor engines.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for the removal of significant emitting units and installation of clean burn technology. MAQP #2782-08 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau, Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

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