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Steve Bullock, Governor  
Tracy Stone-Manning, Director

PRELIMINARY DETERMINATION  
ON PERMIT APPLICATION

Date of Mailing: May 23, 2014

Name of Applicant: Hiland Partners, LP

Source: Natural Gas Compressor Station

Proposed Action: The Department of Environmental Quality (Department) proposes to issue a permit, with conditions, to the above-named applicant. The application was assigned Permit Application Number 3878-02.

Proposed Conditions: See attached.

Public Comment: Any member of the public desiring to comment must submit such comments in writing to the Air Resources Management Bureau (Bureau) of the Department at the above address. Comments may address the Department's analysis and determination, or the information submitted in the application. In order to be considered, comments on this Preliminary Determination are due by June 23, 2014. Copies of the application and the Department's analysis may be inspected at the Bureau's office in Helena. For more information, you may contact the Department.

Departmental Action: The Department intends to make a decision on the application after expiration of the Public Comment period described above. A copy of the decision may be obtained at the above address. The permit shall become final on the date stated in the Department's Decision on this permit, unless an appeal is filed with the Board of Environmental Review (Board).

Procedures for Appeal: Any person jointly or severally adversely affected by the final action may request a hearing before the Board. Any appeal must be filed by the date stated in the Department's Decision on this permit. The request for a hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for a hearing in triplicate to: Chairman, Board of Environmental Review, P.O. Box 200901, Helena, MT

For the Department,

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

Craig Henrikson, P.E.  
Environmental Engineer  
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JM:CH  
Enclosure



Equation

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

Emission Factors

Oxides of nitrogen (NO<sub>x</sub>): 1.0 g/bhp-hr  
Carbon monoxide (CO): 1.0 g/bhp-hr  
Volatile organic compounds (VOC): 1.0 g/bhp-hr

5. HPL 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. HPL shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
7. HPL shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.6 (ARM 17.8.749).
8. HPL shall operate and maintain the flash tank and condenser on the Triethylene Glycol (TEG) Dehydrator unit, to minimize VOC and Hazardous Air Pollutant (HAP) emissions (ARM 17.8.749).
9. HPL shall vent the non-condensable process stream from the 20 MMSCFD TEG associated condenser to the 0.75 MMBtu/hr reboiler combustion chamber (ARM 17.8.752).
10. HPL shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR 63, Subpart HH, *National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities*, for all applicable components. For area sources, this includes each TEG dehydration unit at subject facilities (ARM 17.8.342 and 40 CFR 63, Subpart HH).
11. HPL shall comply with all applicable standards and limitations, and the reporting, record keeping, and notification requirements contained in 40 CFR 60, Subpart JJJJ, *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines* and 40 CFR 63, Subpart ZZZZ, *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*, for any applicable natural gas engine (ARM 17.8.340 and 40 CFR 60, Subpart JJJJ and ARM 17.8.342 and 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. The compressor engine shall be initially tested for NO<sub>x</sub> and CO, concurrently, to demonstrate compliance with the lb/hr emission limits as calculated in Section II.A.3. The initial source testing shall be conducted within 180 days of the initial start up date of the compressor engine. After the initial source test, additional testing shall continue on an every four-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

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

C. Operational Reporting Requirements

1. HPL 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. HPL shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include *the addition of a new emissions unit*, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).
3. All records compiled in accordance with this permit must be maintained by HPL as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

D. Notification

1. HPL shall provide the Department with written notification of commencement of construction of the 20 MMSCFD TEG system within 30 days after commencement of construction.
2. HPL shall provide the Department with written notification of the actual start-up date of the new 20 MM SCFD TEG system within 15 days after the actual start-up date

SECTION III: General Conditions

- A. Inspection – HPL 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 (CEMS, 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 HPL fails to appeal as indicated below.

- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving HPL of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).
- D. Enforcement – Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department’s decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department’s decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department’s decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department’s decision on the application is final 16 days after the Department’s decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by HPL may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Montana Air Quality Permit (MAQP) Analysis  
Hiland Partners, LP  
Midway Compressor Station  
Permit #3878-02

I. Introduction/Process Description

Hiland Partners, LP (HPL) owns and operates the Midway Compressor Station. The facility is a natural gas compressor station located in the SE ¼ of Section 32, Township 24 North, Range 57 East, in Richland County, Montana.

A. Permitted Equipment

The facility consists of the following equipment:

- One (1) 1,478-brakehorsepower (bhp) Compressor Engine;
- One (1) 0.75-million British thermal unit per hour (MMBtu/hr) triethylene glycol (TEG) dehydrator reboiler;
- One (1) 20 million standard cubic feet per day (MMSCFD) TEG dehydrator system with a flash tank, condenser, and associated still vent; and
- Two (2) 400-barrel (bbl) condensate storage tanks.

The Midway Compressor Station consists of a single compressor engine with a maximum rated design capacity of 1478 bhp. The Midway Compressor Station shall only use a four-stroke, rich-burn compressor engine.

B. Source Description

The Midway Compressor Station compresses and transports natural gas from the nearby Bakken gas field. The natural gas fired compressor engine compresses the gas for transmission through the pipeline and the TEG dehydration unit removes moisture from the gas prior to transmission.

C. Permit History

On September 5, 2006, the Department of Environmental Quality - Air Resources Management Bureau (Department) received a complete Montana Air Quality Permit Application from HPL for the construction and operation of the Midway Compressor Station. **MAQP #3878-00** became final and effective on October 18, 2006.

On December 13, 2007, the Department received a request from Bison Engineering on behalf of HPL, to administratively amend MAQP #3878-00 by specifying that the existing flash tank and condenser are permitted equipment associated with the dehydrator still vent. The Department also amended the permit to reflect updated regulations. **MAQP #3878-01** replaced Permit #3878-00

D. Current Permit Action

On April 23, 2014, the Department received a request from Bison Engineering on behalf of HPL, to modify MAQP #3878-01. Under the request, two identical permitted but unconstructed compressor engines (#2 and #3) would be removed from the permit. The 0.25 MMBtu/hr triethylene glycol dehydrator (TEG) reboiler would be removed and replaced with a 0.75 MMBtu/hr TEG reboiler. The 12 MMSCFD TEG dehydrator system would be removed and replaced with a 20 MMSCFD TEG system including flash tank and condenser. **MAQP #3878-02** replaces MAQP #3878-01.

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 location of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

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

HPL 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, HPL 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 one pound of sulfur per MMBtu 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. HPL will burn natural gas in its fuel burning equipment, which will meet this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS), including 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 - The Midway Compressor Station does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK.

- c. 40 CFR 60, Subpart LLL - The Midway Compressor Station does not utilize a sweetening unit to process sour gas.
- d. 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 engines (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 hp, or after January 1, 2008 for engines less than 500 hp. 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 two years) and operates three months or more each year.

The natural gas SI ICE engine at Midway Compressor Station commenced construction after June 12, 2006; however, since it was manufactured before July 1, 2007 this NSPS does not currently apply. The permit is written in a de minimis-friendly manner; therefore, the NSPS could apply to future replacement engines.

8. 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 Maximum Achievable Control Technology (MACT) Subpart as listed below:
- b. 40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. In order for a natural gas production facility to be subject to 40 CFR 63, Subpart HH requirements, the facility must 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. The facility can be either a major or area source of Hazardous Air Pollutants (HAPs).

Based on the information provided by HPL, the Midway Compressor Station facility is considered an area source of HAPs that is subject to 40 CFR 63, Subpart HH. For area sources, the affected source includes each TEG dehydration unit. However, because the glycol dehydration unit emits less than 0.9 megagrams (one ton per year (TPY)) of benzene, it is exempt from the control requirements listed in 40 CFR 63, Subpart HH. Records of the determinations applicable to this exemption must be maintained as required in 40 CFR 63.774(d)(1).

- c. 40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. In order for a natural gas transmission and storage facility to be subject to 40 CFR 63, Subpart HHH requirements, 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. Based on the information submitted by HPL, the Midway Compressor Station 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 for Stationary Reciprocating Internal Combustion Engines (RICE). An affected engine is any existing, new or reconstructed stationary RICE that 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 two years) and operates three months or more each year.

As per 40 CFR 63.6590(a)(2), a RICE at an area source is considered a *new* stationary RICE if the source commenced construction after June 12, 2006. Under 40 CFR 63.2, construction means "the on-site fabrication, erection, or installation of an affected source." Therefore, the engine already installed at the Midway Compressor Station is subject to this MACT.

- D. ARM 17.8, Subchapter 4 – Stack Height and Dispersion Techniques, including, but not limited to:

1. ARM 17.8.401 Definitions. This rule includes a list of definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.402 Requirements. HPL must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or altered stack for HPL is below the allowable 65-meter GEP stack height.

- E. 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. HPL 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, 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.

- F. 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. HPL no longer has controlled PTE emissions greater than 25 tons per year for any of the pollutants of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO) and Volatile Organic Compounds (VOCs); however, under 40 CFR 63 Subpart HH, HPL has federally enforceable conditions related to the TEG condenser. The condenser and routing of the emissions back to the reboiler firebox constitutes a federally enforceable condition and as such an MAQP is required to satisfy that condition.
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. HPL submitted the required permit 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. HPL submitted an affidavit of publication of public notice for the April 27, 2014, issue of the Sidney Herald, a newspaper of general circulation in the Town of Sidney in Richland 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 HPL of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction

of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

G. 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).

H. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any source having:
  - a. PTE > 100 tons/year of any pollutant;
  - b. PTE > 10 tons/year of any one HAP, PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
  - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>) in a serious PM<sub>10</sub> nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3878-02 for HPL, the following conclusions were made:
  - a. The facility's PTE is less than 100 tons/year for any pollutant.
  - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.
  - c. This source is not located in a serious PM<sub>10</sub> nonattainment area.
  - d. This facility is not currently subject to any NSPS, although it could be subject to 40 CFR 60, Subpart JJJJ in the future.
  - e. This facility is subject to the area source provisions of two National Emission Standards for Hazardous Air Pollutants (NESHAP) standards: 40 CFR 63, Subparts HH and ZZZZ.
  - f. This source is not a Title IV affected source, or a solid waste combustion unit.
  - g. This source is not an Environmental Protection Agency (EPA) designated Title V source.

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

### III. BACT Determination

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

A BACT analysis was submitted by HPL in the permit application for MAQP #3878-02 addressing available methods of controlling emissions from the new reboiler and new larger TEG system and related components located at the Midway Compressor Station. The Department reviewed these methods, as well as previous BACT determinations in order to make the following BACT determination. HPL presented three technologies used for VOC control on glycol systems such as that proposed for this project. These options included using a flash tank separator, a condenser, and use of a combustion device such as a flare or equivalent unit for combustion. The fundamental operation of each technology is described below.

#### Flash Tank

A flash tank separator is used to lower the pressure on a process stream thus allowing the less volatile species to be collected and minimizing the loss of VOCs to atmosphere. The more volatile species are then able to be directed to a number of other devices if additional vapor control is warranted.

#### Condenser

A condenser provides for a gas to become saturated and undergo a phase change from a gas to a liquid. The phase change from gas to liquid is normally achieved in one of two ways. The system pressure can be increased at a given temperature to reach saturation or the temperature can be lowered at constant pressure. Most condensing operations use a lowering of the temperature to reach saturation.

### Combustion Devices

Vapors can be combusted in either a flare, thermal oxidizer or in any combustion chamber which has been designed to achieve effective combustion. Normally a minimum destruction efficiency of 98 percent can be achieved in most engineered combustion devices.

HPL is recommending a combination of a flash tank, condenser and by routing the non-condensable vapors to the combustion chamber on the 0.75 MMBtu/hr reboiler. By combining the three technologies available for vapor control, HPL is recommending the highest rated control efficiency and therefore no further analysis is required.

The 0.75 MMBtu/hr reboiler will be fired only on natural gas. As the reboiler will be fired only on natural gas which is considered a clean burning fuel, no additional BACT analysis is required for the proposed new 0.75 MMBtu/hr reboiler.

The control options selected contain control equipment and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

### IV. Emission Inventory

Tons/year					
Source	PM <sub>10</sub>	NO <sub>x</sub>	VOC	CO	SO <sub>x</sub>
4-stroke, rich-burn compressor engine (up to 1,478 bhp)	0.48	14.28	14.28	14.28	0.04
Dehydration Unit					
0.75 MMBtu/hr Reboiler	0.02	0.23	0.013	0.19	0.0014
Still Vent	0	0	2.64	0	0
400 bbl Condensate Storage Tank #1					
Fugitive Losses	0	0	0.5	0	0
Flashing Losses	0	0	1	0	0
400 bbl Condensate Storage Tank #2					
Fugitive Losses	0	0	0.5	0	0
Flashing Losses	0	0	1	0	0
Fugitive VOC Emissions					
Inlet/Fuel Gas Stream	0	0	0.68	0	0
Condensate Stream	0	0	0.44	0	0
<b>Total</b>	<b>0.5</b>	<b>14.51</b>	<b>21.053</b>	<b>14.47</b>	<b>0.0414</b>

<i>a. Emission Inventory reflects enforceable limits on hours of operation and production output.</i>						
CO, carbon monoxide						
NO <sub>x</sub> , oxides of nitrogen						
PM, particulate matter						
PM <sub>10</sub> , particulate matter with an aerodynamic diameter of 10 microns or less						
PM <sub>2.5</sub> , particulate matter with an aerodynamic diameter of 2.5 microns or less						
SO <sub>2</sub> , oxides of sulfur						
VOC, volatile organic compounds						

**1,478-bhp Compressor Engines (1 Engine)**

Brake Horsepower: 1478 bhp

Hours of operation: 8760 hr/yr

PM<sub>10</sub> Emissions

Emission Factor: 9.50E-03 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)

Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)

Calculations: 11.53 MMBtu/hr \* 9.50E-03 lb/MMBtu = 0.11 lb/hr

0.11 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.48 ton/yr

NO<sub>x</sub> Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)

Calculations: 1.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 3.26 lb/hr

3.26 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 14.28 ton/yr

VOC Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)

Calculations: 1.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 3.26 lb/hr

3.26 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 14.28 ton/yr

CO Emissions

Emission factor: 1.00 gram/bhp-hour (BACT Determination)

Calculations: 1.00 gram/bhp-hour \* 1478 bhp \* 0.002205 lb/gram = 3.26 lb/hr

3.26 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 14.28 ton/yr

SO<sub>2</sub> Emission

Emission factor: 5.88E-04 lb/MMBtu (AP-42, Chapter 3, Table 3.2-3, 7/00)

Fuel Consumption: 11.53 MMBtu/hr (Maximum Design)

Calculations: 11.53 MMBtu/hr \* 5.88E-04 lb/MMBtu = 0.01 lb/hr

0.01 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.04 ton/yr

### Dehydration Unit

Hours of operation: 8760 hr/yr

#### 0.75 MMBtu/hour Dehydrator Reboiler

Fuel Heating Value: 1445 (Company Information)  
MMBtu/MMScf  
Fuel Consumption: 0.75 MMBtu/hr (Maximum Design)

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

Emission Factor: 7.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)  
Calculations:  $7.6 \text{ lb/MMScf} * 1 \text{ MMScf}/1445 \text{ MMBtu} * 0.75 \text{ MMBtu/hr} = 0.004 \text{ lb/hr}$   
 $0.004 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.02 \text{ ton/yr}$

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

Emission factor: 100 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)  
Calculations:  $100 \text{ lb/MMScf} * 1 \text{ MMScf}/1445 \text{ MMBtu} * 0.75 \text{ MMBtu/hr} = 0.05 \text{ lb/hr}$   
 $0.05 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.23 \text{ ton/yr}$

#### VOC Emissions

Emission Factor: 5.5 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)  
Calculations:  $5.5 \text{ lb/MMScf} * 1 \text{ MMScf}/1445 \text{ MMBtu} * 0.75 \text{ MMBtu/hr} = 0.003 \text{ lb/hr}$   
 $0.003 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.013 \text{ ton/yr}$

#### CO Emissions

Emission factor: 84 lb/MMScf (AP-42, Chapter 1, Table 1.4-1, 7/98)  
Calculations:  $84 \text{ lb/MMScf} * 1 \text{ MMScf}/1445 \text{ MMBtu} * 0.75 \text{ MMBtu/hr} = 0.04 \text{ lb/hr}$   
 $0.04 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.19 \text{ ton/yr}$

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

Emission Factor: 0.6 lb/MMScf (AP-42, Chapter 1, Table 1.4-2, 7/98)  
Calculations:  $0.6 \text{ lb/MMScf} * 1 \text{ MMScf}/1445 \text{ MMBtu} * 0.75 \text{ MMBtu/hr} = 0.0003 \text{ lb/hr}$   
 $0.0003 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0014 \text{ ton/yr}$

#### Dehydrator Still Vent

#### VOC Emissions

Emission Factor: (GRI GlyCalc, Version 4.0)  
Calculations:  $3.35 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 14.7 \text{ ton/yr}$

### 400 bbl Condensate Storage Tanks (2 Tanks)

Hours of operation: 8760 hr/yr

#### VOC Emissions

Fugitive Losses (Working and Breathing)

Emission Factor: 1,005.07 lb/yr (EPA Tanks, Version 4.0)

Calculations:  $1,005.07 \text{ lb/yr} * 0.0005 \text{ ton/lb} = 0.50 \text{ ton/yr}$

Flashing Losses

Emissions: 1.00 ton/yr

(Vasquez-Beggs Solution Gas/Oil Ratio Correlation Method)

**Fugitive Emissions**

VOC Emissions

Basis for Emission Factors: EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017)

Inlet/Fuel Gas Stream

Hours of operation: 8760 hr/yr

VOC Fraction: 0.4325

Valves: 14 components in gas service

Emission Factor:  $4.5\text{E-}03 \text{ kg/hr/component}$

Calculations:  $4.5\text{E-}03 \text{ kg/hr/component} * 14 \text{ components} * 2.20462 \text{ lb/kg} = 0.1389 \text{ lb/hr}$   
 $0.1389 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.6084 \text{ ton/yr}$

Relief Valves: 9 components in gas service

Emission Factor:  $8.8\text{E-}03 \text{ kg/hr/component}$

Calculations:  $8.8\text{E-}03 \text{ kg/hr/component} * 9 \text{ components} * 2.20462 \text{ lb/kg} = 0.1746 \text{ lb/hr}$   
 $0.1746 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.7647 \text{ ton/yr}$

Connectors: 21 components in gas service

Emission Factor:  $2.0\text{E-}04 \text{ kg/hr/component}$

Calculations:  $2.0\text{E-}04 \text{ kg/hr/component} * 21 \text{ components} * 2.20462 \text{ lb/kg} = 0.0093 \text{ lb/hr}$   
 $0.0093 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0407 \text{ ton/yr}$

Flanges: 42 components in gas service

Emission Factor:  $3.9\text{E-}04 \text{ kg/hr/component}$

Calculations:  $3.9\text{E-}04 \text{ kg/hr/component} * 42 \text{ components} * 2.20462 \text{ lb/kg} = 0.0361 \text{ lb/hr}$   
 $0.0361 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.1581 \text{ ton/yr}$

Totals:  $0.6084 \text{ ton/yr} + 0.7647 \text{ ton/yr} + 0.0407 \text{ ton/yr} + 0.1581 \text{ ton/yr} = 1.5719 \text{ ton/yr}$   
 $1.5719 \text{ ton/yr} * 0.4325 = 0.6798 \text{ ton/yr}$

Condensate Stream

Hours of operation: 8760 hr/yr

VOC Fraction: 0.98

Valves: 5 components in gas service  
Emission Factor: 4.5E-03 kg/hr/component  
Calculations: 4.5E-03 kg/hr/component \* 5 components \* 2.20462 lb/kg = 0.0496 lb/hr  
0.0496 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.2172 ton/yr

Relief Valves: 2 components in gas service  
Emission Factor: 8.8E-03 kg/hr/component  
Calculations: 8.8E-03 kg/hr/component \* 2 components \* 2.20462 lb/kg = 0.0388 lb/hr  
0.0388 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.1699 ton/yr

Connectors: 10 components in gas service  
Emission Factor: 2.0E-04 kg/hr/component  
Calculations: 2.0E-04 kg/hr/component \* 10 components \* 2.20462 lb/kg = 0.0044 lb/hr  
0.0044 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.0193 ton/yr

Flanges: 10 components in gas service  
Emission Factor: 3.9E-04 kg/hr/component  
Calculations: 3.9E-04 kg/hr/component \* 10 components \* 2.20462 lb/kg = 0.0086 lb/hr  
0.0086 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.0377 ton/yr

Totals: 0.2172 ton/yr + 0.1699 ton/yr + 0.0193 ton/yr + 0.0377 ton/yr = 0.4441 ton/yr  
0.4441 ton/yr \* 0.98 = 0.4352 ton/yr

Total Component Fugitives from Inlet/Fuel Gas Stream: 1.115 ton/yr

**400 bbl Condensate Storage Tanks (2 Tanks)**

Hours of operation: 8760 hr/yr

VOC Emissions

Fugitive Losses

Emission Factor: 1,005.07 lb/yr (EPA Tanks, Version 4.0)  
Calculations: 1,005.07 lb/yr \* 0.0005 ton/lb = 0.50 ton/yr

Flashing Losses

Emissions: 1.00 ton/yr (Vasquez-Beggs Solution Gas/Oil Ration Correlation Method)

**Fugitive Emissions**

VOC Emissions

Basis for Emission Factors: EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017)

Inlet/Fuel Gas Stream

Hours of operation: 8760 hr/yr  
VOC Fraction: 0.4325

Valves: 14 components in gas service  
Emission Factor: 4.5E-03 kg/hr/component  
Calculations: 4.5E-03 kg/hr/component \* 14 components \* 2.20462 lb/kg = 0.1389 lb/hr  
0.1389 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.6084 ton/yr

Relief Valves: 9 components in gas service  
Emission Factor: 8.8E-03 kg/hr/component  
Calculations:  $8.8E-03 \text{ kg/hr/component} * 9 \text{ components} * 2.20462 \text{ lb/kg} = 0.1746 \text{ lb/hr}$   
 $0.1746 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.7647 \text{ ton/yr}$

Connectors: 21 components in gas service  
Emission Factor: 2.0E-04 kg/hr/component  
Calculations:  $2.0E-04 \text{ kg/hr/component} * 21 \text{ components} * 2.20462 \text{ lb/kg} = 0.0093 \text{ lb/hr}$   
 $0.0093 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0407 \text{ ton/yr}$

Flanges: 42 components in gas service  
Emission Factor: 3.9E-04 kg/hr/component  
Calculations:  $3.9E-04 \text{ kg/hr/component} * 42 \text{ components} * 2.20462 \text{ lb/kg} = 0.0361 \text{ lb/hr}$   
 $0.0361 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.1581 \text{ ton/yr}$

Totals:  $0.6084 \text{ ton/yr} + 0.7647 \text{ ton/yr} + 0.0407 \text{ ton/yr} + 0.1581 \text{ ton/yr} = 1.5719 \text{ ton/yr}$   
 $1.5719 \text{ ton/yr} * 0.4325 = 0.6798 \text{ ton/yr}$

Condensate Stream

Hours of operation: 8760 hr/yr  
VOC Fraction: 0.98

Valves: 5 components in gas service  
Emission Factor: 4.5E-03 kg/hr/component  
Calculations:  $4.5E-03 \text{ kg/hr/component} * 5 \text{ components} * 2.20462 \text{ lb/kg} = 0.0496 \text{ lb/hr}$   
 $0.0496 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.2172 \text{ ton/yr}$

Relief Valves: 2 components in gas service  
Emission Factor: 8.8E-03 kg/hr/component  
Calculations:  $8.8E-03 \text{ kg/hr/component} * 2 \text{ components} * 2.20462 \text{ lb/kg} = 0.0388 \text{ lb/hr}$   
 $0.0388 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.1699 \text{ ton/yr}$

Connectors: 10 components in gas service  
Emission Factor: 2.0E-04 kg/hr/component  
Calculations:  $2.0E-04 \text{ kg/hr/component} * 10 \text{ components} * 2.20462 \text{ lb/kg} = 0.0044 \text{ lb/hr}$   
 $0.0044 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0193 \text{ ton/yr}$

Flanges: 10 components in gas service  
Emission Factor: 3.9E-04 kg/hr/component  
Calculations:  $3.9E-04 \text{ kg/hr/component} * 10 \text{ components} * 2.20462 \text{ lb/kg} = 0.0086 \text{ lb/hr}$   
 $0.0086 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.0377 \text{ ton/yr}$

Totals:  $0.2172 \text{ ton/yr} + 0.1699 \text{ ton/yr} + 0.0193 \text{ ton/yr} + 0.0377 \text{ ton/yr} = 0.4441 \text{ ton/yr}$   
 $0.4441 \text{ ton/yr} * 0.98 = 0.4352 \text{ ton/yr}$

A more complete emission inventory is on file with the Department including calculations submitted by HPL using the program GRI GLYCalc.

V. Existing Air Quality

The facility is located in the SE ¼ of Section 32, Township 24 North, Range 57 East, in Richland County, Montana. The air quality of this area is classified as either Better than National Standards or unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

Because controlled emissions from this permitting action would exhibit good dispersion characteristics and would not exceed any Montana ambient air quality modeling threshold, the Department determined that controlled emissions from the source will not cause or contribute to a violation of any ambient air quality standard.

## VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted 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)

## VIII. Environmental Assessment

An environmental assessment, required by the Montana Environmental Policy Act, was completed for this project. A copy is attached.

Analysis Prepared By: Craig Henrikson

Date: April 25, 2014

**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Permitting and Compliance Division**  
**Air Resources Management Bureau**  
**P.O. Box 200901, Helena, Montana 59620**  
**(406) 444-3490**

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)**

*Issued To:* Hiland Partners, LP  
Midway Compressor Station  
P.O. Box 5103  
Enid, OK 73701

*Montana Air Quality Permit Number (MAQP):* 3878-02

*Preliminary Determination Issued:* May 23, 2014

*Department Decision Issued:*

*Permit Final:*

1. *Legal Description of Site:* The Midway Compressor Station is located in the SE ¼ of Section 32, Township 24 North, Range 57 East, in Richland County, Montana.
2. *Description of Project:* Hiland Partners, LP (HPL) proposes to remove from the permit two previously permitted engines which were never installed. Additionally, the 0.25 MMBtu/hr triethylene glycol (TEG) reboiler would be removed and replaced with a 0.75 MMBtu/hr TEG reboiler. The 12 million standard cubic feet per day (MMSCFD) TEG dehydrator system would be removed and replaced with a 20 MMSCFD TEG system including flash tank and condenser.
3. *Objectives of Project:* The objective of the modification is to expand the dehydration capacity for the remaining compressor engine.
4. *Alternatives Considered:* In addition to the proposed action, the Department of Environmental Quality (Department) also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because HPL demonstrated compliance with all applicable rules and regulations as required for permit issuance. 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 Best available control technology (BACT) analysis, is included in MAQP #3878-02.
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 table summarizes the potential physical and biological effects of the proposed project on the human environment. The “no-action” alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Terrestrial and Aquatic Life and Habitats				X		Yes
B	Water Quality, Quantity, and Distribution				X		Yes
C	Geology and Soil Quality, Stability and Moisture				X		Yes
D	Vegetation Cover, Quantity, and Quality				X		Yes
E	Aesthetics				X		Yes
F	Air Quality				X		Yes
G	Unique Endangered, Fragile, or Limited Environmental Resources				X		Yes
H	Demands on Environmental Resource of Water, Air and Energy			X			Yes
I	Historical and Archaeological Sites				X		Yes
J	Cumulative and Secondary Impacts			X			Yes

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

The site is within a general use range for antelope, but not in the winter range. Additionally the site is in an area potentially used by pheasant and other terrestrials. The proposed facility modification would have no impacts on terrestrial and aquatic life and habitats in the project area as the project. The facility modification would result in a significant drop in permitted emissions and likely provide a minor decrease in actual emissions. The Department has determined that any impacts from emissions or deposition of pollutants would not occur due to the dispersion characteristics of the pollutants, the atmosphere, as the project results in a decrease in permitted emissions.

B. Water Quality, Quantity and Distribution

The proposed project would not be expected to have any impact on water quality, quantity, and distribution in the project area. The project would not have any discharges into surface water or onto the proposed project site. Water may be required for continued fugitive dust control of the access roads and the general facility property.

C. Geology and Soil Quality, Stability and Moisture

The proposed facility modification would not be expected to have any impact on geology and soil quality, stability, and moisture because the facility is existing. In addition, a significant decrease in permitted emissions and a minor decrease in actual emissions will likely occur at the facility. No impacts to the geology and soil quality, stability, and moisture from facility construction would occur due to the facility modification.

D. Vegetation Cover, Quantity, and Quality

The project would not likely have any effect on the local vegetation. The impacts from emissions or deposition of pollutants would decrease as the permitted emissions decrease significantly under the project and actual emissions would also show a minor decrease.

E. Aesthetics

The proposed project would not have any effect on the local aesthetics. Since the facility already exists, adding a new larger reboiler and TEG dehydration system would not be expected to have an impact.

F. Air Quality

The area surrounding the proposed project is unclassifiable/attainment for the National Ambient Air Quality Standards (NAAQS) for all criteria air pollutants. Emissions of air pollutants would likely decrease as a result of the permit action; however, MAQP #3878-02 contain conditions limiting opacity and compressor engine emissions and require HPL to minimize airborne dust through the use of water or chemical dust suppressants and to operate pollution control equipment to minimize engine emissions of oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), and volatile organic compounds (VOC). Compliance with all of the permit conditions would ensure that effects to the local air quality would improve as the project would result in a decrease in actual emissions.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The proposed project would not have any impacts on unique endangered, fragile, or limited environmental resources because emissions of particulate matter with an aerodynamic diameter of 10 microns or less (PM<sub>10</sub>), NO<sub>x</sub>, CO, VOC, and sulfur oxides (SO<sub>x</sub>) would decrease in the area under the project. The Department believes that no impacts due to the relatively small amount of the above listed pollutants emitted, dispersion characteristics of the pollutants and the atmosphere, and conditions placed in MAQP #3878-02, including, but not limited to, BACT requirements discussed in Section III of the permit analysis for this permit.

The Montana Natural Heritage Program (MNHP), Natural Resource Information System (NRIS) earlier identified no occurrences of species of concern within the vicinity of the proposed project location that are classified either as sensitive, special status, or without classification. Since the project would result in a decrease in permitted emissions and likely a small decrease in actual emissions, a new NRIS search was not conducted.

H. Demands on Environmental Resource of Water, Air and Energy

The proposed project would have a minor impact on environmental resources of water, air, and energy. Water may be required to continue to control dust from the access roads and overall plant area. The remaining compressor engine would be a source of air emissions. The Department has determined that any impacts from emissions or deposition of pollutants would be minor due to the dispersion characteristics of the pollutants, the atmosphere, and the conditions contained in MAQP #3878-02.

I. Historical and Archaeological Sites

The Department earlier contacted the Montana Historical Society, State Historical Preservation Office (SHPO) at initial permit issuance in an effort to identify any historical and archaeological sites that may be present in the area of operation. According to their records

there are no previously recorded sites in the area of the proposed project location and there is a low likelihood of adverse disturbance to any known archaeological or historic site. Therefore, since the facility already exists, no impacts upon historical or archaeological sites would be expected as a result of this permitting action.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the physical and biological environment in the immediate area would be minor due to the relatively small size and potential environmental impact from all operations at the site. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #3878-02.

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

		Major	Moderate	Minor	None	Unknown	Comments Included
A	Social Structures and Mores			X			Yes
B	Cultural Uniqueness and Diversity				X		Yes
C	Local and State Tax Base and Tax Revenue			X			Yes
D	Agricultural or Industrial Production			X			Yes
E	Human Health			X			Yes
F	Access to and Quality of Recreational and Wilderness Activities			X			Yes
G	Quantity and Distribution of Employment			X			Yes
H	Distribution of Population			X			Yes
I	Demands for Government Services			X			Yes
J	Industrial and Commercial Activity			X			Yes
K	Locally Adopted Environmental Plans and Goals				X		Yes
L	Cumulative and Secondary Impacts			X			Yes

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

A. Social Structures and Mores

The proposed project would cause minor, if any, impacts disruptions to native or traditional lifestyles or communities (social structures or mores) in the area because the proposed project would take place in a relatively remote location. Further, the continued operation of the natural gas compressor station with a larger TEG dehydration system would require no permanent employees on site, and would not result in any, or very little, immigration of new people to the area for employment purposes; thereby, having little if any impact on the social and economic resources of the area.

Additional activity (vehicle traffic, construction equipment, etc.) may be noticeable during addition of the project construction. Once the facility modification is complete, activities associated with the operation of the facility would be minor. Overall, any impacts to the social structures and mores in the area would be minor.

B. Cultural Uniqueness and Diversity

The proposed project would not cause any impacts or disruptions to native or traditional lifestyles or communities (cultural uniqueness and diversity) in the area because the proposed project would occur at an existing facility. Further, the continued operation of the natural gas compressor station with a larger TEG dehydration system would require no permanent employees on site, and would not result in any, or very little, immigration of new people to the area for employment purposes; thereby, having little if any impact on the social and economic resources of the area. .

C. Local and State Tax Base and Tax Revenue

The proposed project would result in only minor impacts to the local and state tax base and tax revenue because the small scope of the proposed project. In addition, only minor amounts of construction would be needed to complete the project; therefore, any construction related jobs would be temporary and the impacts from the construction jobs would be temporary.

D. Agricultural or Industrial Production

The land surrounding the existing facility location is rural agricultural farming land. However, because the facility expansion would be relatively small and within the existing site, the proposed project would result in no impacts to agricultural production. The proposed project would have minor impacts to industrial production because the proposed project would have a slightly expanded dehydration capacity. There are existing oil and gas industrial activities located in the area.

While emissions of air pollutants and corresponding deposition of pollutants would occur, the Department determined that the chance of deposition of pollutants impacting agricultural or industrial production in the area surrounding the site would be minor.

E. Human Health

The proposed project would result in minor, if any, impacts to human health. Deposition of pollutants would occur; however, the Department determined that the proposed project would comply with all applicable air quality rules, regulations, and standards. These rules, regulations, and standards are designed to be protective of human health. Overall any impacts to public health would be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The proposed project would have minor, if any, impacts on access to recreational and wilderness activities because of the relatively remote location and the relatively small size of the proposed project. The project would have minor impacts on the quality of recreational and wilderness activities in the area because the addition of a larger TEG dehydration system would be visible and produce more noise. Overall any impacts to the access and quality of recreational and wilderness activities in the area would be minor.

G. Quantity and Distribution of Employment

The proposed project would have minor, if any, impacts on the quantity and distribution of employment because no permanent employees would be hired for the proposed project. In addition, temporary construction-related positions may result from this project but any impacts

to the quantity and distribution of employment from construction related employment would be minor due to the relatively small size of the facility and the corresponding relatively short time period that would be associated with constructing the facility.

#### H. Distribution of Population

The proposed project would have minor, if any, impacts on the distribution of population in the area because the facility modification would be located in a relatively remote location and the proposed project would not require a permanent employee to operate the facility. Therefore, no people would be moving to the area for employment opportunities.

#### I. Demands for Government Services

There would be minor impacts on the demands for government services because additional time would be required by government agencies to issue MAQP #3878-02 and to assure compliance with applicable rules, standards, and conditions that would be contained in those permits. There would like be an increase in vehicle traffic primarily during the facility modification. Vehicle traffic during construction would be minor due to the relatively short time period that would be required to perform the modification. Overall, any demands for government services to regulate the facility or activities associated with the facility would be minor due to the relatively small size of the facility expansion.

#### J. Industrial and Commercial Activity

Only minor impacts would be expected on the local industrial and commercial activity because the proposed project would represent only a minor increase in the industrial and commercial activity in the area, particularly during construction. The proposed project would be relatively small and would take place at a relatively remote location. Overall, any impacts to the local industrial and commercial activity of the area would be minor.

#### K. Locally Adopted Environmental Plans and Goals

The Department is unaware of any locally adopted environmental plans or goals. The permit would ensure compliance with state standards and goals. The state standards would protect the site and the environment surrounding the site.

#### L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in minor impacts to the economic and social aspects of the human environment in the immediate area. Due to the relatively small size of the facility modification, the industrial production, employment, and tax revenue (etc.) changes resulting from the proposed project would be minor. In addition, the Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as would be outlined in MAQP #3878-02.

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

The current permitting action is for the addition of a larger TEG dehydration system at the existing Midland Compressor Station site. The permitting action also removes two previously permitted engines which were never constructed and therefore, under this proposed action the emissions will go down. MAQP #3878-02 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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