Montana Department of
ENVIRONMENTAL QUALITY

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August 20, 2014

Ron Lowney
WBI Energy Transmission, Inc.
2010 Montana Avenue
Glendive, MT 59330

Dear Mr. Lowney:

Montana Air Quality Permit #2854-03 is deemed final as of August 20, 2014, by the Department of Environmental Quality (Department). This permit is for a natural gas compressor station. All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

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

Rhonda Payne
Environmental Science Specialist
Air Resources Management Bureau
(406) 444-5287

JM:RP
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #2954-03

WBI Energy Transmission, Inc.
Baker Compressor Station
2010 Montana Avenue
Glendive, MT 59330

August 20, 2014

MONTANA AIR QUALITY PERMIT

Issued To:	WBI Energy Transmission, Inc. Baker Compressor Station 2010 Montana Avenue Glendive, MT 59330	MAQP: #2954-03 Application Complete:: 06/03/2014 Preliminary Determination Issued: 06/30/2014 Department's Decision Issued: 8/4/2014 Permit Final: 8/20/2014 AFS: #025-0010

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

SECTION I: Permitted Facilities

A. Plant Location

WBI owns and operates a natural gas compressor station known as the Baker Compressor Station. The facility is located on Highway 12, east of Baker, Montana. The legal description of the facility is the Southeast ¼, of the Southeast ¼, of Section 12, Township 7 North, Range 59 East in Fallon County, Montana. A complete list of the permitted equipment is contained in Section I.A of the permit analysis.

B. Current Permit Action

On May 22, 2014, the Montana Department of Environmental Quality (Department) received an MAQP application from WBI to replace engines EU006 and EU007 (two 330 brake-horsepower (bhp) Ingersoll-Rand) with a model year 2014 384-bhp Ajax DPC-2802 LE 2-stroke lean burn (2SLB) spark ignition reciprocating internal combustion engine (SI RICE) with an Oxidation Catalyst (OC) for an air pollution control device.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. WBI shall not operate more than one 1,680-Hp Waukesha Compressor Engine at any given time. The engine shall have a minimum stack height of 18 feet above ground level and emissions from the engine shall be controlled with a Non-Selective Catalytic Reduction (NSCR) Unit and an Air to Fuel Ratio (AFR) controller. Emissions from the 1,680-Hp Waukesha Compressor Engine shall not exceed the following (ARM 17.8.749 and ARM 17.8.752):

Oxides of Nitrogen (NO_x) (as NO_2)	7.41 pounds per hour (lb/hr)
Carbon Monoxide (CO)	11.11 lb/hr
Volatile Organic Compounds (VOC)	3.70 lb/hr

2. WBI shall not operate more than one 384-bhp Ajax DPC-2802LE lean burn compressor engine at any given time. The emissions from the engine shall be controlled with an oxidation catalyst. Emissions from the Ajax DPC-2802LE engine shall not exceed the following (ARM 17.8.752):

NO_x	0.85 lb/hr	and	1.0 grams per brake horsepower-hour (g/bhp-hr)
CO	1.69 lb/hr	and	2.0 g/bhp-hr
VOC	0.59 lb/hr	and	0.7 g/bhp-hr

3. Each of the three 540-Hp Cooper-Bessemer Compressor Engines shall have a minimum stack height of 35 feet above ground level (ARM 17.8.749).

4. WBI 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. WBI 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. WBI 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. WBI 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. WBI shall comply with any applicable standards, limitations, reporting, recordkeeping, and notification requirements contained in Title 40 Code of Federal Regulations (40 CFR) 60, Subpart JJJJ – New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines and 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (ARM 17.8.340, 40 CFR 60, Subpart JJJJJ, 40 CFR 63, Subpart ZZZZ).

B. Testing Requirements

1. WBI shall test the 1,680-Hp Waukesha Compressor Engine for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.1 within 180 days of initial start-up of the engine. Further testing shall occur on an every-4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

2. WBI shall test the 384-bhp Ajax Compressor Engine for NO_x and CO, concurrently, to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.2 within 180 days of the initial start-up date of the

engine. Further testing shall occur on an every 4-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and ARM 17.8.749).

3. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).

4. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. WBI 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 to verify compliance with permit limitations (ARM 17.8.505).

2. WBI shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include the addition of a new emissions unit, a change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location or fuel specifications, or would result in an increase in source capacity above its permitted operation or the addition of a new emission unit. The notice must be submitted to the Department, in writing, 10 days prior to start up or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(1)(d) (ARM 17.8.745).

3. All records compiled in accordance with this permit must be maintained by WBI as a permanent business record for at least 5 years following the date of the measurement, must be available at the plant site for inspection by the Department, and must be submitted to the Department upon request (ARM 17.8.749).

SECTION III: General Conditions

A. Inspection – WBI 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 Emissions Monitoring System (CEMS), Continuous 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 WBI fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving WBI 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 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 WBI 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
WBI Energy Transmission Inc.
Baker Compressor Station
MAQP #2954-03

I. Introduction/Process Description

WBI Energy Transmission, Inc. (WBI) owns and operates a natural gas compressor station known as the Baker Compressor Station. The facility is located on Highway 12, east of Baker, Montana. The legal description of the facility is the Southeast ¼, of the Southeast ¼, of Section 12, Township 7 North, Range 59 East in Fallon County, Montana.

A. Permitted Equipment

The facility consists of the following equipment:

- Three 540-Horsepower (Hp) Cooper-Bessemer Compressor Engines. One of the engines was installed in 1955 and the other two engines were installed in 1957.
- One 1,680-Hp Waukesha Compressor Engine installed in 2003.
- One 384-Brake-horsepower (bhp) Ajax Engine to be installed in 2014.

Miscellaneous Tanks including:

- One 1,000-gallon used oil tank (Tank #2)
- One 13,230-gallon hydrocarbon condensate tank (Tank #3)
- Two 657-gallon new oil tanks (Tanks #4 and #5)
- One 1,000-gallon slop oil/water tank (Tank #9)
- One 4,512-gallon used oil tank (Tank #11)
- Three 150-gallon new oil tanks (Tanks #12, #17, #18)
- Two 60-gallon new oil tanks (Tanks #13 and #14)
- Two 113-gallon new oil tanks (Tanks #15 and #16)
- Six 55-gallon used oil drums
- One 600-gallon slop oil tank (Tank #19)
- One 200-gallon new oil tank (Tank #20)
- One 120-gallon new oil tank (Tank #21)
- One 360-gallon new oil tank (Tank #22)
- One 4,000 gallon slop oil/water tank (Tank #23)

Building and process heaters including:

- One 3.0-million British thermal unit per hour (MMBtu/hr) direct fired dehydration unit regenerator
- Two 0.15-MMBtu/hr Armstrong Space Heaters
- One 0.065-MMBtu/hr AO Smith Water Heater
- Three 0.0075-MMBtu/hr Gorgon Ray Radiant Space Heaters
- One 1.26-MMBtu/hr Mueller Steam Boiler (Space Heating)
- One 0.05-MMBtu/hr Modine Space Heater
- Three 0.018-MMBtu/hr Bruest Catalytic Radiant Space Heaters

- Two 0.125-MMBtu/hr ITT Grinnell Aerothermes
- Three 0.2-MMBtu/hr Janitrol Space Heaters
- One 0.05-MMBtu/hr Town Border Station Space Heater
- One 0.125-MMBtu/hr Enerteck Tank Heater
- Fugitive VOC emissions from valves, flanges, open-ended lines, and pump seals

B. Source Description

The facility has two primary purposes. The first is to pump the field gas up to the required pressure in the natural gas transmission system. Compression of the gas is accomplished using the natural gas fired compressors described above. Various building and process heaters provide heat to the various station facilities and processes.

The second purpose of the facility is to "dry" the gas as it is being processed. The gas contains moisture, which must be removed from the system prior to being sent into the transmission system. This is accomplished with a dry dessicant dehydration system. This type of system uses two contact towers filled with a solid dessicant material. When wet gas flows through a contact tower, water is absorbed onto the surface of the dessicant material. Once the material in one tower has become saturated, the flow of gas is switched to the other tower. The regenerator heater is used to dry saturated material in one tower while wet gas flows through the other. After dehydration, some of the dry natural gas is used as fuel in the fuel burning equipment at the facility.

C. Permit History

Prior to January 24, 2003, WBI was exempt from the requirements to obtain a preconstruction permit because the facility was constructed and operating prior to November 23, 1968. However, on November 26, 2003, WBI submitted a complete MAQP application proposing to install a 1,680-Hp Waukesha Compressor Engine that has the potential to emit greater than 25 tons per year.

While the Baker Compressor Station is a major source as defined under the New Source Review (NSR) program, the installation of the 1,680-Hp Waukesha Compressor Engine did not trigger the NSR program because the Potential to Emit (PTE) of the 1,680-Hp Waukesha Compressor Engine is below the Prevention of Significant Deterioration (PSD) significant levels. On January 24, 2003, **MAQP #2954-00** became final.

On January 8, 2004, the Department of Environmental Quality – Air Resources Management Bureau (Department) received an administrative amendment request from WBI. WBI requested that the Department make emission offsets from the 1,680-Horsepower (Hp) Waukesha Compressor Engine a federally enforceable permit condition to allow WBI the flexibility to "swap" 1,680-Hp Waukesha compressor engines at the facility. The permit action incorporated WBI's request into the permit. **MAQP #2954-01** replaced MAQP #2954-00.

On December 10, 2012, the Department received an Administrative Amendment (AA) request from WBI to change the official name of the company from Williston Basin Interstate Pipeline Company to WBI Energy Transmission, Inc. **MAQP #2954-02** replaced MAQP #2954-01.

D. Current Permit Action

On May 22, 2014, the Department received an MAQP application from WBI to replace engines EU006 and EU007 (two 330 brake-horsepower (bhp) Ingersoll-Rand) with a 2014 384 bhp Ajax DPC-2802 LE 2-stroke lean burn (2SLB) spark ignition reciprocating internal combustion engine (SI RICE) with an Oxidation Catalyst (OC) for an air pollution control device. In addition, this permit action updates the equipment list in the permit analysis to list all the miscellaneous tanks at the facility. Lastly, this permit action serves to update the permit to reflect current permit language and rule references used by the Department. **MAQP #2954-03** replaces MAQP #2954-02.

E. Response to Public Comments (only if there are comments received)

Person/Group Commenting	Permit Reference	Comment	Department Response
WBI	Page 1.Permit.Contact Information	Correct mailing address from P.O. Box 131 to 2010 Montana Avenue	Department made the requested change
WBI	Page 1.Permit Analysis. Section I.A Permitted Equipment	Update the Miscellaneous Tanks listing to reflect what was submitted in the May 20, 2014 application	Department made the requested change
WBI	Page 1.Permit Analysis. Section I.A Permitted Equipment	Remove the reference to 'reboiler' after the dehydration unit regenerator in the listing of Building and Process Heaters.	Department made the requested change
WBI	Page 2.Permit Analysis. Section I.B Source Description	The second paragraph describes a type of dehydration unit not used at Baker. The section describes the process for using a glycol unit to dry the gas. A dry dessicant dehydration system is used at Baker.	Department made the requested change
WBI	Page 6.Permit Analysis. Section II.D.2 of Subchapter 4	Section II.D.2 states that no new stacks are associated with the current permit action. However, because the project involves replacing two existing units with one new unit, there is a new stack associated with the action.	Department made the requested change
WBI	Page 7.Permit Analysis. Section II.F.5 of Subchapter 7	Section II.F.5 states that the current permit action does not require an application because it is considered an administrative action. WBI Energy believes this language was carried over from the previous permit. Please update the language to accurately reflect the current permitting action.	Department made the requested change
WBI	Page 13-28.Permit Analysis. Section IV Emissions Inventory Table & Emissions Inventory	Please correct the Equipment Description for Emitting Unit IEU1 to read '3.0 MMBtu/hr Direct Fired Regenerator Heater in both the emission inventory table and specific calculations below.	Department made the requested change

F. 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).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly, by telephone, whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than 4 hours.

5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

WBI 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 20% for all fugitive emission sources and that reasonable precautions are taken to control emissions of airborne particulate matter (PM). (2) Under this rule, WBI shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne PM.

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 PM 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 PM in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. WBI will burn pipeline-quality natural gas in their compressor engines, 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 60, Standards of Performance for New Stationary Sources (NSPS).

   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 JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. The Baker Compressor Station is subject to this subpart as the 2014 384-Bhp Ajax SI RICE was manufactured and installed after the applicability date of July 1, 2007 and is less than 500 Bhp as outlined in the subpart.

8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. A major Hazardous Air Pollutant (HAP) source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as applicable, including the following subparts:

   a. 40 CFR 63, Subpart A – General Provisions apply to all equipment or facilities subject to an New Emissions Standard for Hazardous Air Pollutants (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 standards and provisions of 40 CFR Part 63, Subpart HH. Based on information submitted to the Department, which included a complete Hazardous Air Pollutant (HAP) emission inventory, the WBI facility is not a National Emission Standards for Hazardous Air Pollutants (NESHAP) affected source because the facility does not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HH and does not operate a triethylene glycol dehydrator (TEG) which would be the only affected source under the area source provisions of this regulation.

   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 Part 63, Subpart HHH. Based on information submitted to the Department, which included a complete HAP emission inventory, the WBI facility is not a NESHAP affected source because the facility does not meet the definition of a major source of HAPs as defined in 40 CFR Part 63, Subpart HHH.

   d. 40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). An owner or operator of a stationary RICE at a major or area source of HAP emissions is subject to this subpart, except if the stationary RICE is being tested at a stationary RICE test cell/stand. Therefore, WBI is subject to this subpart.

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. WBI must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP).

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. WBI 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 facility to obtain an air quality permit or permit modification if they construct, modify or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. WBI has the PTE more than 25 tons per year of Oxides of Nitrogen (NO_x), and Carbon Monoxide (CO) therefore, an air quality permit is required.

3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit (MAQP) 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 are not subject to the MAQP 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. WBI 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. WBI submitted an affidavit of publication of public notice for the May 23, 2014, issue of the Fallon County Times, a newspaper of general circulation in the Town of Baker in Fallon County, MT 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 Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving WBI of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*.

10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than 1 year after the permit is issued.

12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that does 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 listed source, but NO_x and CO emissions are greater than or equal to 250 tons per year; therefore, the facility is major. This permit action will not cause a net emissions increase greater than significance levels and, therefore, it does not require a New Source Review (NSR) analysis.

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 PM 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 amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #2954-03 for WBI, the following conclusions were made:

a. The facility's PTE is greater than 100 tons/year for NO_x and CO.

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_{10} nonattainment area.

d. This facility is subject to a current NSPS (40 CFR 60, Subpart JJJJ).

e. This facility is subject to NESHAP standard (40 CFR 63, Subpart ZZZZ).

f. This source is not a Title IV affected source, nor a solid waste combustion unit.

g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that WBI is a "major source" of emissions as defined under Title V. The most recent Title V Operating Permit #OP2954-06 for this facility was issued by the Department on February 21, 2014.

III. BACT Determination

A BACT determination is required for each new or modified source. WBI Energy 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 used.

A BACT determination was submitted by WBI in the permit application for MAQP #2954-03 addressing available methods of controlling emissions from the new engine located at the Baker Compressor Station. The Department reviewed the methods provided, as well as previous BACT determinations for compressor engines before making the following BACT determination.

A. Compressor Engine

The primary criteria pollutants from natural gas-fired reciprocating engines are NO_x, CO and VOCs. The formation of nitrogen oxides is exponentially related to combustion temperature in the engine cylinder. The other pollutants, CO and VOC species, are primarily the result of incomplete combustion. Particulate matter (PM) emissions include trace amounts of metals, non-combustible inorganic material, and condensable, semi-volatile organics which result from volatized lubricating oil, engine wear, or from products of incomplete combustion. Sulfur oxides (SO_x) are very low since sulfur compounds are removed from natural gas at processing plants. However, trace amounts of sulfur containing odorant are added to natural gas for the purpose of leak detection.

Three control techniques have been identified for reciprocating engines: parametric controls (timing and operating at a leaner air-to-fuel ration); combustion modifications such as advanced engine design for new sources or major modifications to existing sources (clean-burn cylinder head designs and pre-stratified charge combustion for rich-burn engines); and post-combustion catalytic

controls installed on the engine exhaust system. Post-combustion catalytic technologies include selective catalytic reduction (SCR) units for lean-burn engines, Nonselective Catalytic Reduction (NSCR) for rich-burn engines, and CO oxidation catalysts for lean-burn engines.

The proposed engine is of a two-stroke lean-burn class; therefore, rich burn technologies were not considered in this BACT analysis.

1. NO_x and CO BACT

   As part of the NO_x and CO BACT analysis, the following control technologies were reviewed:

   a. No additional controls
   b. Air fuel ratio (AFR) control only
   c. A selective catalytic reduction (SCR) and AFR control
   d. A lean burn engine with an oxidation catalyst.

   a. No Additional Controls

      This practice would consist of operating natural gas compressor engines without any add-on pollution control equipment.

      Internal combustion engine operating with no additional controls is a technically feasible option for the compression and transmission of natural gas, as proposed by WBI. Using this approach would result in no additional energy or economic impacts associated with control equipment; however, no additional controls would result in negative impacts on air quality due to increased NO_x and CO emissions when compared to other existing and technically feasible control options. Therefore, the Department determined that 'no additional controls' would not constitute BACT for the 384-bhp Ajax natural gas compressor engine.

   b. AFR control only (Good Combustion Practices)

      Good Combustion Practices involves parametric monitoring to ensure the emission unit continually operates as close to optimum (i.e., minimum NO_x emission) conditions as practicable. Potential control parameters include air to fuel ratio, fuel specification, and combustion temperature and pressure. Other aspects of Good Combustion Practices include officially documented operating procedures which include provisions for startup, shutdown, and malfunctions; officially documented and adhered to maintenance procedures; routinely scheduled evaluation, inspection, and overhaul as appropriate; operating logs; and adequate personnel training on operating procedures.

      Most Good Combustion Practices have been developed not as pollution control options *per se* but as economic incentives to improve fuel efficiency and avoid costs associated with equipment failure. Good Combustion Practices are typically source-specific, site-specific, or both.

In terms of source-specific practices, for example, manufacturers provide their customers with preventative maintenance recommendations that specify a logical sequence of inspections and repair actions that are necessary to ensure good performance and to prevent equipment failures. Alternatively, site-specific Good Combustion Practices are often developed relying on the extensive experience gained through years of operation to identify when changes in the monitored parameters indicate the need for maintenance. Good Combustion Practices are typically employed to maintain the particular combustion scenario (e.g., stoichiometric, rich, etc.) desired. Finally, Good Combustion Practices typically represent the baseline emissions scenario against which all add-on control options are assessed.

c. An SCR and AFR control

Selective catalytic reduction is a post-combustion technology that has been shown to be effective in reducing NO_x in exhaust from lean-burn engines. An SCR system consists of an ammonia storage, feed, and injection system, and a catalyst and catalyst housing. Selective catalytic reduction systems selectively reduce NO_x emissions by injecting ammonia (either in the form of liquid anhydrous ammonia or aqueous ammonium hydroxide) into the exhaust gas stream upstream of the catalyst. NO_x, ammonia (NH_3), and oxygen (O_2) react on the surface of the catalyst to form nitrogen (N_2) and water (H_2O). For the SCR system to operate properly, the exhaust gas must be within a particular temperature range (typically between 450 and 850°F). The temperature range is dictated by the catalyst (typically made from noble metals, base metal oxides such as vanadium and titanium, and zeolite-based material). Exhaust gas temperatures greater than the upper limit (850°F) will pass the NO_x and ammonia unreacted through the catalyst. Ammonia emissions, called NH_3 slip, are key consideration when specifying a SCR system. SCR is most suitable for lean-burn engines operated at constant loads, and can achieve efficiencies as high as 90 percent, as referenced in EPA's AP-42 Chapter 3.2 – Natural Gas-fired Reciprocating Engines Section 3.2.4.2. For engines which typically operate at variable loads, such as engines on gas transmission pipelines, an SCR system may not function effectively, causing either periods of ammonia slip or insufficient ammonia to gain the reductions needed.

Controlling the air to fuel ratio can be obtained by adjusting the engine to operate at the crossover point, where NO_x and CO emissions are equal. The NO_x and CO emissions from a lean-burn engine can be stabilized by installing an electronic AFR controller. This device maintains the proper air to fuel ratio that will optimize the performance of the lean burn engine. A lean-burn engine with an AFR controller achieves approximately the same reduction in emissions as a rich-burn engine fitted with an NSCR unit and an AFR controller. At the crossover point, the engine operates neither too lean nor too rich. Excess hydrocarbon in a rich fuel mixture causes incomplete combustion; thus, lowering the exhaust temperature to a point where the concentration of NO_x decreases, but the concentration

of CO increases. Combustion of a lean fuel mixture occurs at higher temperatures, resulting in a higher concentration of NO_x, but a lower CO concentration.

An engine can operate manually at the crossover point; however, the engine must be tuned frequently to account for operational changes such as varying engine load, operating temperature, fuel gas quality, etc.

Baker Compressor Station is on a gas transmission pipeline and as such must adjust to variable loads. SCR may not function effectively if an engine is not operated at a constant load. As such, the Department has determined that an SCF and AFR controls do not constitute BACT for the 384-bhp Ajax natural gas compressor engine.

d. A lean burn engine with an oxidation catalyst

A lean-burn engine uses a pre-combustion chamber to enclose a rich mixture of air and fuel which is then ignited in this chamber. The resulting ignition front then fires into the larger main cylinder that contains a much leaner fuel mixture. Staging the combustion and burning a leaner fuel mixture results in lowering of peak flame temperatures. Lower combustion temperature assures lower NO_x concentration in the exhaust gas stream; however, excess air in the fuel to air mixture can result in increased CO emissions.

Catalytic oxidation is a post-combustion technology that has been applied, in limited cases, to oxidize CO in engine exhaust, typically from lean-burn engines. As previously mentioned, lean-burn technologies may cause increased CO emissions. The application of catalytic oxidation has been shown to be effective in reducing CO emissions from lean-burn engines. In a catalytic oxidation system, CO passes over a catalyst, usually a noble metal, which oxidizes the CO to carbon dioxide (CO_2) at efficiencies of approximately 70 percent for 2SLB engines and 90 percent for 4SLB engine, as referenced in EPA's AP-42 Chapter 3.2 – Natural Gas-fired Reciprocating Engines Section 3.2.4.2.

The use of a lean burn engine with an oxidation catalyst is the highest ranking control alternative; is frequently used and consistent with other recently permitted similar sources in the natural gas compression industry; and is the control option proposed by WBI. Therefore, the top control option is selected as BACT for NO_x and CO emissions and no further analysis is necessary. The emission limits will be 1.0 g/bhp-hr and 2.0 g/bhp-hr for NO_x and CO respectively. This is equivalent to NO_x and CO mass emission rates of 0.85 lb/hr and 1.7 lb/hr, respectively, when operating at maximum capacity.

2. VOC BACT

The Department is not aware of any BACT determinations that have required controls for VOC emissions from compressor engines. WBI proposed the use of a lean burn engine with an oxidation catalyst to meet a g/bhp-hr

emission limit equivalent to 0.7 g/bhp-hr. The Department has determined that no additional controls and burning pipeline quality natural gas constitute BACT with an associated emission limitation of 0.7 g/bhp-hr (equivalent to 0.59 lb/hr when operating at maximum capacity).

3. PM_{10} and SO_2 BACT

All PM emitted is considered to be particulate matter with an aerodynamic diameter of 2.5 microns and less ($PM_{2.5}$) (AP-42 Table 3.2-3). The Department is not aware of any BACT determinations that have required controls for $PM_{10}/PM_{2.5}$, or SO_2 emissions from natural gas fired compressor engines. WBI proposed no additional controls, and burning pipeline quality natural gas as BACT for $PM_{10}/PM_{2.5}$ and SO_2 emissions from the proposed compressor engine. Due to the relatively small amount of $PM_{10}/PM_{2.5}$, and SO_2 emissions from the proposed engine, and the cost of adding additional control, any add-on controls would be cost prohibitive. Therefore, the Department determined no additional controls and burning pipeline quality natural gas would constitute BACT for $PM_{10}/PM_{2.5}$ and SO_2 emissions for the proposed compressor engine. This is consistent with previous BACT determinations made by the Department for natural gas-fired compressor engines.

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

IV. Emission Inventory

Emitting Unit #	Equipment Description	Emissions (tons/year)							
		PM	PM_{10}	$PM_{2.5}$	NO_x	CO	VOC	SO_x	HAP
EU001	540-Hp Cooper Bessemer Compressor Engine	0.9	0.7	0.7	131.0	84.0	0.4	0.01	1.3
EU008	540-Hp Cooper Bessemer Compressor Engine	0.9	0.7	0.7	131.0	84.0	0.4	0.01	1.3
EU009	540-Hp Cooper Bessemer Compressor Engine	0.9	0.7	0.7	131.0	84.0	0.4	0.01	1.3
EU012	1,680-Hp Waukesha Compressor Engine	1	0.6	0.6	32.0	49.0	16.0	0.04	1.7
New Unit	384-Bhp Ajax Compressor Engine	0.7	0.5	0.5	4.0	7.0	0.3	0.01	0.9
IEU1	3.0 MM Btu/hr Direct Fired Regenerator Heater	0.09	0.04	0.04	1.3	1.3	0.09	0.01	0.02
IEU2	Miscellaneous Tanks	---	---	---	---	---	0.4	---	---
IEU3	Misc. Boilers and Process Heaters	0.2	0.04	0.04	2.0	2.0	0.1	0.01	0.04
IEU4	Misc. Valves/Seals/Connections/Flanges/ Open-Ended Lines	---	---	---	---	---	0.57	---	0.01
Total Emissions		4.9	3.3	3.3	434.3	313.3	18.9	0.1	6.9

Source #1 - EU001

540-Bhp Cooper Bessemer GMVA-4 Compressor Engine	(2 Stroke RICE - Lean-Burn Engine with no Pollution Controls)		
Brake Horsepower:	540 Bhp		
Hours of Operation:	8,760 hr/yr		
Max Fuel Combustion Rate:	4.158 MM Btu/Bhp-hr (Applicant Information)		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Notes:			
Note (AP-42, Table 3.2-1, footnote i):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions.		
Note (AP-42, Table 3.2-1, footnote j):	Because not data was available for PM (Condensable) emissions, the same emissions factor was used from 4SLB engines (9.91E-03 lb/MM Btu).		
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions		
Thus:	PM Total Emissions = 0.0384 lb/MM Btu + 0.00991 lb/MM Btu = 0.04831 lb/MM Btu		
Calculations:			
PM (Total Particulate PM2.5/PM10) Emissions:	Values are for Total PM10 and PM2.5 Emissions		
Emissions Factor:	4.831 E-2 lb/MM Btu (AP-42 Chapter 3, Table 3.2-1, 7/00)		
Calculations:	(0.04831 lb/MM Btu) * (4.158 MM Btu/hr) =	0.20	lb/hr
Calculations:	(0.20 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.9	ton/yr
Where:			
PM (Filterable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	3.84 E-02 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.0384 lb/MM Scf) * (4.158 MM Scf/hr) =	0.16	lb/hr
Calculations:	(0.16 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.7	ton/yr
PM (Condensable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	9.91 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.00991 lb/MM Scf) * (4.158 MM Scf/hr) =	0.04	lb/hr
Calculations:	(0.04 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.2	ton/yr
NOx Emissions:			
Emissions Factor:	25.00 gram NOx/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(25.00 gram NOx/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	29.8	lb/hr

Calculations:	(29.8 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	131	ton/yr

CO Emissions:

Emissions Factor:	16.00 gram CO/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(16.00 gram CO/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	19.1	lb/hr
Calculations:	(19.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	84	ton/yr

VOC Emissions:

Emissions Factor:	29.60 lb/MM Scf (Information from company - Title V Permit Application)		
Calculations:	(29.60 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (4.158 MM Btu/hr) =	0.1	lb/hr
Calculations:	(0.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.4	ton/yr

SOx Emissions:

Emissions Factor:	5.88 E-04 lb/MM Btu (AP-42, Section 3, Table 3.2-1, 7/00)		
Calculations:	(0.000588 lb/MM Btu) * (4.158 MM Btu/hr) =	0.002	lb/hr
Calculations:	(0.002 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Formaldehyde =	0.9491 (ton/yr)
Methanol =	0.0426 (ton/yr)
Acetaldehyde =	0.1334 (ton/yr)
Acrolein =	0.1338 (ton/yr)
Benzene =	0.0334 (ton/yr)
Toluene =	0.0166 (ton/yr)
Ethylbenzene =	0.0019 (ton/yr)
Xylenes (m,p,o) =	0.0046 (ton/yr)
n-Hexane =	0.0077 (ton/yr)
Total (All HAPS) =	1.3660 (ton/yr)

HAPS Summary Values:

Largest HAPS (Formaldehyde):	0.9491 (ton/yr)		
Total HAPS (lb/hr) =	1.3660 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.31	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPS Calc 3.01 Modeling Result) =	1.37	ton/yr

Source #2 - EU008

540-Bhp Cooper Bessemer GMV-4 Compressor Engine	(2 Stroke RICE - Lean-Burn Engine with no Pollution Controls)
Brake Horsepower :	540 Bhp

Hours of Operation:	8,760 hr/yr		
Max Fuel Combustion Rate:	4.158 MM Btu/Bhp-hr (Applicant Information)		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Notes:			
Note (AP-42, Table 3.2-1, footnote i):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions.		
Note (AP-42, Table 3.2-1, footnote j):	Because not data was available for PM (Condensable) emissions, the same emissions factor was used from 4SLB engines (9.91E-03 lb/MM Btu).		
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions		
Thus:	PM Total Emissions = 0.0384 lb/MM Btu + 0.00991 lb/MM Btu = 0.04831 lb/MM Btu		
Calculations:			
<u>PM (Total Particulate PM2.5/PM10) Emissions</u>:	Values are for Total PM10 and PM2.5 Emissions		
Emissions Factor:	4.831 E-2 lb/MM Btu (AP-42 Chapter 3, Table 3.2-1, 7/00)		
Calculations:	(0.04831 lb/MM Btu) * (4.158 MM Btu/hr) =	0.20	lb/hr
Calculations:	(0.20 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.9	ton/yr
Where:			
<u>PM (Filterable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	3.84 E-02 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.0384 lb/MM Scf) * (4.158 MM Scf/hr) =	0.16	lb/hr
Calculations:	(0.16 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.7	ton/yr
<u>PM (Condensable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	9.91 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.00991 lb/MM Scf) * (4.158 MM Scf/hr) =	0.04	lb/hr
Calculations:	(0.04 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.2	ton/yr
<u>NOx Emissions</u>:			
Emissions Factor:	25.00 gram NOx/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(25.00 gram NOx/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	29.8	lb/hr
Calculations:	(29.8 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	131	ton/yr

CO Emissions:			
Emissions Factor:	16.00 gram CO/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(16.00 gram CO/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	19.1	lb/hr
Calculations:	(19.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	84	ton/yr
VOC Emissions:			
Emissions Factor:	29.60 lb/MM Scf (Information from company - Title V Permit Application)		
Calculations:	(29.60 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (4.158 MM Btu/hr) =	0.1	lb/hr
Calculations:	(0.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.4	ton/yr
SOx Emissions:			
Emissions Factor:	5.88 E-04 lb/MM Btu (AP-42, Section 3, Table 3.2-1, 7/00)		
Calculations:	(0.000588 lb/MM Btu) * (4.158 MM Btu/hr) =	0.002	lb/hr
Calculations:	(0.002 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr
Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)		
Formaldehyde =	0.9491 (ton/yr)		
Methanol =	0.0426 (ton/yr)		
Acetaldehyde =	0.1334 (ton/yr)		
Acrolein =	0.1338 (ton/yr)		
Benzene =	0.0334 (ton/yr)		
Toluene =	0.0166 (ton/yr)		
Ethylbenzene =	0.0019 (ton/yr)		
Xylenes (m,p,o) =	0.0046 (ton/yr)		
n-Hexane =	0.0077 (ton/yr)		
Total (All HAPS) =	1.3660 (ton/yr)		
HAPS Summary Values:			
Largest HAPS (Formaldehyde):	0.9491 (ton/yr)		
Total HAPS (lb/hr) =	1.3660 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.31	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPS Calc 3.01 Modeling Result) =	1.37	ton/yr

Source #3 - EU009

540-Bhp Cooper Bessemer GMV-4 Compressor Engine	(2 Stroke RICE - Lean-Burn Engine with no Pollution Controls)
Brake Horsepower :	540 Bhp
Hours of Operation:	8,760 hr/yr

Max Fuel Combustion Rate:	4.158 MM Btu/Bhp-hr (Applicant Information)		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Notes:			
Note (AP-42, Table 3.2-1, footnote i):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions.		
Note (AP-42, Table 3.2-1, footnote j):	Because not data was available for PM (Condensable) emissions, the same emissions factor was used from 4SLB engines (9.91E-03 lb/MM Btu).		
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions		
Thus:	PM Total Emissions = 0.0384 lb/MM Btu + 0.00991 lb/MM Btu = 0.04831 lb/MM Btu		
Calculations:			
<u>PM (Total Particulate PM2.5/PM10) Emissions</u>:	Values are for Total PM10 and PM2.5 Emissions		
Emissions Factor:	4.831 E-2 lb/MM Btu (AP-42 Chapter 3, Table 3.2-1, 7/00)		
Calculations:	(0.04831 lb/MM Btu) * (4.158 MM Btu/hr) =	0.20	lb/hr
Calculations:	(0.20 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.9	ton/yr
Where:			
<u>PM (Filterable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	3.84 E-02 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.0384 lb/MM Scf) * (4.158 MM Scf/hr) =	0.16	lb/hr
Calculations:	(0.16 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.7	ton/yr
<u>PM (Condensable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	9.91 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.00991 lb/MM Scf) * (4.158 MM Scf/hr) =	0.04	lb/hr
Calculations:	(0.04 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.2	ton/yr
<u>NOx Emissions</u>:			
Emissions Factor:	25.00 gram NOx/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(25.00 gram NOx/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	29.8	lb/hr
Calculations:	(29.8 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	131	ton/yr

CO Emissions:			
Emissions Factor:	16.00 gram CO/Bhp-hr (Information from company - Title V Permit Application)		
Calculations:	(16.00 gram CO/Bhp-hr) * (540 Bhp) * (0.002205 lb/gram) =	19.1	lb/hr
Calculations:	(19.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	84	ton/yr
VOC Emissions:			
Emissions Factor:	29.60 lb/MM Scf (Information from company - Title V Permit Application)		
Calculations:	(29.60 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (4.158 MM Btu/hr) =	0.1	lb/hr
Calculations:	(0.1 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.4	ton/yr
SOx Emissions:			
Emissions Factor:	5.88 E-04 lb/MM Btu (AP-42, Section 3, Table 3.2-1, 7/00)		
Calculations:	(0.000588 lb/MM Btu) * (4.158 MM Btu/hr) =	0.002	lb/hr
Calculations:	(0.002 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr
Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)		
Formaldehyde =	0.9491 (ton/yr)		
Methanol =	0.0426 (ton/yr)		
Acetaldehyde =	0.1334 (ton/yr)		
Acrolein =	0.1338 (ton/yr)		
Benzene =	0.0334 (ton/yr)		
Toluene =	0.0166 (ton/yr)		
Ethylbenzene =	0.0019 (ton/yr)		
Xylenes (m,p,o) =	0.0046 (ton/yr)		
n-Hexane =	0.0077 (ton/yr)		
Total (All HAPS) =	1.3660 (ton/yr)		
HAPS Summary Values:			
Largest HAPS (Formaldehyde):	0.9491 (ton/yr)		
Total HAPS (lb/hr) =	1.3660 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.31	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPS Calc 3.01 Modeling Result) =	1.37	ton/yr

Source #4 - EU012

1680 -Bhp Waukesha 7044 Compressor Engine	(4 Stroke RICE - Rich-Burn Engine with no Pollution Controls)		
Brake Horsepower :	1,680 Bhp		
Hours of Operation:	8,760 hr/yr		
Max Fuel Combustion Rate:	13.188 MM Btu/Bhp-hr (Applicant Information)		

Fuel Heating Value:	0.001 MM Scf/MM Btu		
Notes:			
Note (AP-42, Table 3.2-3, footnote i):	No data was available for uncontrolled engines (PM 10 emissions are for engines equipped with a PCC)		
Note (AP-42, Table 3.2-3, footnote j):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions.		
Note (AP-42, Table 3.2-3, footnote k):	Because not data was available for PM (Condensable) emissions, the same emissions factor was used from 4SLB engines (9.91E-03 lb/MM Btu).		
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions		
Thus:	PM Total Emissions = 0.00950 lb/MM Btu + 0.00991 lb/MM Btu = 0.01941 lb/MM Btu		
Calculations:			
<u>PM (Total Particulate PM2.5/PM10) Emissions</u>:	Values are for Total PM10 and PM2.5 Emissions		
Emissions Factor:	1.941E-2 lb/MM Btu (AP-42 Chapter 3, Table 3.2-3, 7/00)		
Calculations:	(0.01941 lb/MM Btu) * (13.188 MM Btu/hr) =	0.26	lb/hr
Calculations:	(0.26 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	1	ton/yr
Where:			
<u>PM (Filterable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	9.50 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-3, 7/00)		
Calculations:	(0.00950 lb/MM Scf) * (13.188 MM Scf/hr) =	0.13	lb/hr
Calculations:	(0.13 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.6	ton/yr
<u>PM (Condensable Particulate PM2.5/PM10) Emissions</u>:			
Emissions Factor:	9.91 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-3, 7/00)		
Calculations:	(0.00991 lb/MM Scf) * (13.188 MM Scf/hr) =	0.13	lb/hr
Calculations:	(0.13 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.6	ton/yr
<u>NOx Emissions</u>:			
Emissions Factor:	2.00 gram NOx/Bhp-hr (BACT Determination)		

Calculations:	(2.00 gram NOx/Bhp-hr) * (1,680 Bhp) * (0.002205 lb/gram) =	7.41	lb/hr
Calculations:	(7.41 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	32	ton/yr

CO Emissions:

Emissions Factor:	3.00 gram CO/Bhp-hr (BACT Determination)		
Calculations:	(3.00 gram CO/Bhp-hr) * (1,680 Bhp) * (0.002205 lb/gram) =	11.11	lb/hr
Calculations:	(11.11 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	49	ton/yr

VOC Emissions:

Emissions Factor:	1.0 gram VOC/Bhp-hr (BACT Determination)		
Calculations:	(1.0 gram VOC/Bhp-hr) * (1,680 Bhp) * (0.002205 lb/gram) =	3.7	lb/hr
Calculations:	(3.7 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	16	ton/yr

SOx Emissions:

Emissions Factor:	5.88 E-04 lb/MM Btu (AP-42, Section 3, Table 3.2-3, 7/00)		
Calculations:	(0.000588 lb/MM Btu) * (13.188 MM Btu/hr) =	0.01	lb/hr
Calculations:	(0.01 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.04	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Formaldehyde =	1.0966 (ton/yr)
Methanol =	0.1637 (ton/yr)
Acetaldehyde =	0.1492 (ton/yr)
Acrolein =	0.1407 (ton/yr)
Benzene =	0.0845 (ton/yr)
Toluene =	0.0298 (ton/yr)
Ethylbenzene =	0.0013 (ton/yr)
Xylenes (m,p,o) =	0.0104 (ton/yr)
n-Hexane =	0.0000 (ton/yr)
Total (All HAPS) =	1.7270 (ton/yr)

HAPS Summary Values:

Largest HAPS (Formaldehyde):	1.0966 (ton/yr)		
Total HAPS (lb/hr) =	1.7270 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.39	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPS Calc 3.01 Modeling Result) =	1.73	ton/yr

Source #5 - New Unit

384-Bhp Ajax DPC-2802 LE

Compressor Spark Ignition Reciprocating Internal Combustion Engine (SI RICE)

Brake Horsepower:	384 Bhp (2-Stroke SI RICE - Lean Burn with an Oxidization Catalyst for pollution control)		
Hours of Operation:	8,760 hr/yr		
Max Fuel Combustion Rate:	7,873 Btu/Bhp-hr (Applicant Information)		
	(7,873 Btu/Bhp-hr)*(384 Bhp)*(MM Btu/1,000,000 Btu) = 3.02 MM Btu/hr		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Notes:			
Note (AP-42, Table 3.2-1, footnote i):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions.		
Note (AP-42, Table 3.2-1, footnote j):	Because not data was available for PM (Condensable) emissions, the same emissions factor was used from 4SLB engines (9.91E-03 lb/MM Btu).		
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions		
Thus:	PM Total Emissions = 0.0384 lb/MM Btu + 0.00991 lb/MM Btu = 0.04831 lb/MM Btu		
Calculations:			
PM (Total Particulate) Emissions:	Values are for Total PM10 and PM2.5 Emissions		
Emissions Factor:	4.831 E-2 lb/MM Btu (AP-42 Chapter 3, Table 3.2-1, 7/00)		
Calculations:	(0.04831 lb/MM Btu) * (3.02 MM Btu/hr) =	0.15	lb/hr
Calculations:	(0.15 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.7	ton/yr
Where:			
PM (Filterable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	3.84 E-02 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.0384 lb/MM Scf) * (3.02 MM Scf/hr) =	0.12	lb/hr
Calculations:	(0.12 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.5	ton/yr
PM (Condensable Particulate) Emissions:			
Emissions Factor:	9.91 E-03 lb/MM Scf (AP-42, Chapter 1, Table 3.2-1, 7/00)		
Calculations:	(0.00991 lb/MM Scf) * (3.02 MM Scf/hr) =	0.03	lb/hr
Calculations:	(0.03 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.1	ton/yr

NOx Emissions:

Emissions Factor:	1.0 gram NOx/Bhp-hr (BACT Determination)		
Calculations:	(1.0 gram NOx/Bhp-hr) * (384 Bhp) * (0.002205 lb/gram) =	0.85	lb/hr
Calculations:	(0.85 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	4	ton/yr

CO Emissions:

Emissions Factor:	2.0 gram CO/Bhp-hr (BACT Determination)		
Calculations:	(2.0 gram CO/Bhp-hr) * (384 Bhp) * (0.002205 lb/gram) =	1.7	lb/hr
Calculations:	(1.7 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	7	ton/yr

VOC Emissions:

Emissions Factor:	0.70 gram VOC/Bhp-hr (BACT Determination)		
Calculations:	(0.70 gram VOC/Bhp-hr) * (384 Bhp) * (0.002205 lb/gram) =	0.59	lb/hr
Calculations:	(0.59 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.3	ton/yr

SOx Emissions:

Emissions Factor:	5.88*10E-4 lb SOx/MM Btu (AP-42, Section 3, Table 3.2-1, 7/00)		
Calculations:	(0.000588 lb/MM Btu) * (7,873 Btu/Bhp-hr) * (384 Bhp) * (MM Btu/10^6 Btu) =	0.002	lb/hr
Calculations:	(0.002 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Formaldehyde =	0.6749 (ton/yr)
Methanol =	0.0303 (ton/yr)
Acetaldehyde =	0.0949 (ton/yr)
Acrolein =	0.0951 (ton/yr)
Benzene =	0.0237 (ton/yr)
Toluene =	0.0118 (ton/yr)
Ethylbenzene =	0.0013 (ton/yr)
Xylenes (m,p,o) =	0.0033 (ton/yr)
n-Hexane =	0.0054 (ton/yr)
Total (All HAPS) =	0.9709 (ton/yr)

HAPS Summary Values:

Largest HAPS (Formaldehyde) =	0.6749 (ton/yr)		
Total HAPS (lb/hr) =	0.9709 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.22	lb/hr

Total HAPS (ton/yr) =	(GRI-HAPSCalc 3.01 Modeling Result) =	0.97	ton/yr

Source #6 - IEU1

Dehy Regeneration Heater

3.0 MM Btu/hr Direct Fired Regenerator Heater	(for Reboiler Dry Bed Dehydration Unit)		
Boiler Heat Output :	3.00 MM Btu/hr (Applicant Information)		
Hours of Operation:	8,760 hr/yr		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Fuel Consumption:	(3.00 MM Btu/hr) * (0.001 MM Scf/MM Btu) =	0.003	MM Scf/hr
Fuel Consumption:	(3.00 MM Btu/hr) * (0.001 MM Scf/MM Btu) * (8,760 hr/yr) =	26.28	MM Scf/yr

Notes:

Note (AP-42, Table 1.4-2, footnote c):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions. PM (Condensable) emissions, is the particulate matter collected using EPA Method 202 (or equivalent) and prior to the filter of EPA Method 5 (or equivalent) sample train.
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions
Thus:	PM (Total) Emissions = 1.9 lb/MM Scf + 5.7 lb/MM Scf = 7.6 lb/MM Scf

Calculations:

PM (Total Particulate PM2.5/PM10) Emissions:	7.6 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(7.6 lb/MM Scf) * (0.003 MM Scf/hr) =	0.02	lb/hr
Calculations:	(0.02 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.09	ton/yr

Where:

PM (Filterable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	1.9 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(1.9 lb/MM Scf) * (0.003 MM Scf/hr) =	0.01	lb/hr
Calculations:	(0.01 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.04	ton/yr
PM (Condensable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	5.7 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(5.7 lb/MM Scf) * (0.003 MM Scf/hr) =	0.02	lb/hr
Calculations:	(0.02 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.09	ton/yr

NOx Emissions:

Emissions Factor:	100.0 lb/MM Scf (AP-42 Chapter 1, Table 1.4-1, 7/98)		
Calculations:	(100.0 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (3.00 MM Btu/hr) =	0.3	lb/hr
Calculations:	(0.3 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	1.31	ton/yr

CO Emissions:

Emissions Factor:	84.0 lb/MM Scf (AP-42 Chapter 1, Table 1.4-1, 7/98)		
Calculations:	(84.0 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (3.00 MM Btu/hr) =	0.3	lb/hr
Calculations:	(0.3 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	1.31	ton/yr

VOC Emissions:

Emissions Factor:	5.5 lb/MM Scf (AP-42 Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(5.5 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (3.00 MM Btu/hr) =	0.02	lb/hr
Calculations:	(0.02 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.09	ton/yr

SOx Emissions:

Emissions Factor:	0.60 lb/MM Scf (AP-42 Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(0.60 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (3.00 MM Btu/hr) =	0.002	lb/hr
Calculations:	(0.002 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Formaldehyde =	0.0010 (ton/yr)
n-Hexane =	0.0232 (ton/yr)
Total (HAPS) =	0.0242 (ton/yr)

HAPS Summary Values:

Largest HAPS (n-Hexane) =	0.0232 (ton/yr)		
Total HAPS (lb/hr) =	0.0242 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.006	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPSCalc 3.01 Modeling Result) =	0.02	ton/yr

(Source #7 - IEU2)

Miscellaneous Tanks

Hours of Operation:	8,760 hr/yr

VOC Emissions:

Emissions Factor:	755.45 lb/yr (Results of TANKS 4.0 Emissions Estimation Program)		
Calculations:	(755.45 lb/yr) * (yr/8,760 hr) =	0.09	lb/hr
Calculations:	(755.45 lb/yr) * (0.0005 ton/lb) =	0.4	ton/yr

Source #8 - IEU3

Misc. Boilers and Process Heaters

Heater Output:	5.00 MM Btu/hr		
Hours of Operation:	8,760 hr/yr		
Fuel Heating Value:	0.001 MM Scf/MM Btu		
Fuel Consumption:	(5.00 MM Btu/hr) * (0.001 MM Scf/MM Btu) =	0.005	MM Scf/hr
	(5.00 MM Btu/hr) * (0.001 MM Scf/MM Btu) * (8,760 hr/yr) =	43.80	MM Scf/yr

Notes:

Note (AP-42, Table 1.4-2, footnote c):	PM (Filterable) Emissions are all considered ≤ 1μm in aerodynamic diameter. Therefore, for PM (Filterable) emissions, PM10 (filterable) emissions = PM 2.5 (Filterable) emissions. PM (Condensable) emissions, is the particulate matter collected using EPA Method 202 (or equivalent) and prior to the filter of EPA Method 5 (or equivalent) sample train.
Therefore:	PM (Total) emissions = (Filterable) emissions + (Condensable) emissions
Thus:	PM (Total) Emissions = 1.9 lb/MM Scf + 5.7 lb/MM Scf = 7.6 lb/MM Scf

Calculations:

PM (Total Particulate PM2.5/PM10) Emissions:	7.6 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(7.6 lb/MM Scf) * (0.005 MM Scf/hr) =	0.04	lb/hr
Calculations:	(0.04 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.2	ton/yr

Where:

PM (Filterable Particulate PM2.5/PM10) Emissions:			
Emissions Factor:	1.9 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(1.9 lb/MM Scf) * (0.005 MM Scf/hr) =	0.01	lb/hr
Calculations:	(0.01 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.04	ton/yr

PM (Condensable Particulate PM2.5/PM10) Emissions:	
Emissions Factor:	5.7 lb/MM Scf (AP-42, Chapter 1, Table 1.4-2, 7/98)

Calculations:	(5.7 lb/MM Scf) * (0.005 MM Scf/hr) =	0.03	lb/hr
Calculations:	(0.03 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb)	0.1	ton/yr

NOx Emissions:

Emissions Factor:	100.0 lb/MM Scf (AP-42 Chapter 1, Table 1.4-1, 7/98)		
Calculations:	(100.0 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (5.00 MM Btu/hr) =	0.50	lb/hr
Calculations:	(0.5 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	2	ton/yr

CO Emissions:

Emissions Factor:	84.0 lb/MM Scf (AP-42 Chapter 1, Table 1.4-1, 7/98)		
Calculations:	(84.0 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (5.00 MM Btu/hr) =	0.42	lb/hr
Calculations:	(0.42 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	2	ton/yr

VOC Emissions:

Emissions Factor:	5.5 lb/MM Scf (AP-42 Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(5.5 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (5.00 MM Btu/hr) =	0.03	lb/hr
Calculations:	(0.03 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.1	ton/yr

SOx Emissions:

Emissions Factor:	0.60 lb/MM Scf (AP-42 Chapter 1, Table 1.4-2, 7/98)		
Calculations:	(0.60 lb/MM Scf) * (0.001 MM Scf/MM Btu) * (5.00 MM Btu/hr) =	0.003	lb/hr
Calculations:	(0.003 lb/hr) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.01	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Formaldehyde =	0.0015 (ton/yr)
n-Hexane	0.0410 (ton/yr)
Total HAPS (ton/yr) =	0.0425 (ton/yr)

HAPS Summary Values:

Largest HAPS (n-Hexane) =	0.0410 (ton/yr)		
Total HAPS (lb/hr) =	0.0425 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.01	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPSCalc 3.01 Modeling Result) =	0.04	ton/yr

Source #9 - IEU4

Misc. Connections

(Valves/Seals/Connections/Flanges/Open-Ended Lines)

Fugitive VOC =	TOC - methane - ethane = 100 - 85.12 - 8.84 =	6.04 %	{WBI Gas Analy-sis}
Calculations:	(2.1533 lb/hr) * (0.0604) =	0.13	lb/hr
Calculations:	(2.1533 lb/hr) * (0.0604) * (8,760 hr/yr) * (0.0005 ton/lb) =	0.57	ton/yr

Summary of HAPS Values (List of major constituents):	(Calculated with GRI-HAP Calc 3.01 - Using EPA Literature Emissions Factors)
Benzene =	0.0010 (ton/yr)
Toluene =	0.0038 (ton/yr)
Ethylbenzene =	0.0002 (ton/yr)
Xylenes (m,p,o) =	0.0010 (ton/yr)
Total (HAPS) =	0.0073 (ton/yr)

HAPS Summary Values:			
Largest HAPS (Toluene) =	0.0038 (ton/yr)		
Total HAPS (lb/hr) =	0.0073 (ton/yr) * (2,000 lb/ton) * (1 yr/8,760 hr) =	0.002	lb/hr
Total HAPS (ton/yr) =	(GRI-HAPSCalc 3.01 Modeling Result) =	0.01	ton/yr

V. Existing Air Quality

The facility is located in the Southeast ¼ of the Southeast ¼ of Section 12, Township 7 North, Range 59 East in Fallon 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

Aspen Consulting and Engineering (Aspen) submitted air dispersion modeling for NO_x emissions from the WBI Baker Compressor Station, on behalf of WBI, as part of Permit Application #2954-00. The modeling analysis utilized the ISC3 model.

WBI used 5 years of meteorological data (1987-1991) for the model. The surface data was collected at the Williston/Sloulin International Airport. Upper air data utilized for the model was taken from the Bismarck Airport. The receptor grid elevations were derived from digital elevation model (DEM) files using the United States Geological Survey (USGS) 7.5-minute series (1:24,000 scale) digitized topographical maps. The Baker, Baker NE, Morris Butte, and Buffalo Reservoir quadrangles in USGS's DEM file format were used to develop the receptor grid. The receptors were placed at 50-meter intervals along the fence line, 100-meter intervals from the fence line to 1 kilometer, and at 500-meter intervals from 1 kilometer to 10 kilometers. Additionally, a 500-meter by 1,000-meter "hot spot" receptor grid was placed around the modeled hot spot with 50 meter spacing on the south side of the facility.

Downwash was calculated using the EPA BPIP program. The building corner coordinates and peak roof heights were obtained from a WBI plot plan to determine the appropriate direction-specific building dimension parameters to use for each emission source modeled. The Bear Paw Energy-Baker Gas Plant NO_x sources were included in the model at the Department's request.

In the model, WBI made adjustments to the facility to assure compliance with the Montana Ambient Air Quality Standards (MAAQS) and WBI requested that the Department recognize the adjustments during the permitting process. Specifically, WBI requested that NO_x emissions from each of the two 330-Hp Ingersoll-Rand Compressor Engines be limited to 9.1 lb/hr. In addition, WBI requested that the stack heights of each of the two 330-Hp Ingersoll-Rand Compressor Engines and each of the three 540-Hp Cooper-Bessemer Compressor Engines be increased to a minimum of 35 feet above ground level. Without these changes, the sources were severely downwashed and the model predicted violations of the NAAQS/MAAQS. Therefore, the Department included the proposed stack heights and emission rates as conditions in MAQP #2954-00 to ensure compliance with the ambient standards. The limits remain in MAQP #2954-03 for the 540-Hp Cooper-Bessemer engines that are still present at the facility.

The Ambient Ratio Method and the Ozone Limiting Method were applied to the NO_x emissions to convert the modeled concentrations to NO_2 for comparison to the NAAQS/MAAQS. The modeled concentrations were below the NAAQS/MAAQS. In the view of the Department, the amount of controlled emissions from this facility will still not cause or contribute to an exceedance of any ambient air quality standard because the current permit action does not result in an increase of emissions.

VII. Taking or Damaging Implication Analysis

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

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

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
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FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued To: Williston Basin Interstate Pipeline Company
Baker Booster and Sandstone Compressor Station
P.O. Box 131
Glendive, MT 59330

Montana Air Quality Permit number: 2954-03

Preliminary Determination Issued: 06/30/2014
Department Decision Issued: 08/4/2014
Permit Final: 08/20/2014

1. *Legal Description of Site*: The WBI station is located on Highway 12, east of Baker, Montana, in the Southeast ¼, of the Southeast ¼, of Section 12, Township 7 North, Range 59 East in Fallon County, Montana.

2. *Description of Project*: WBI proposes to replace engines EU006 and EU007 (two 330 brake-horsepower (bhp) Ingersoll-Rand) with a model year 2014 384-bhp Ajax DPC-2802 LE 2-stroke lean burn (2SLB) spark ignition reciprocating internal combustion engine (SI RICE) with an Oxidation Catalyst (OC) for an air pollution control device. The facility purpose is to serve as a central compressor station which receives natural gas from nearby production field facilities and dehydrates and compresses the natural gas for transmission through the pipeline.

3. *Objectives of Project*: The proposed project would provide additional business and revenue for WBI by allowing the company to gather and transmit large quantities of natural gas. Natural gas would be received from nearby production field facilities and the gas would be dehydrated and compressed for transmission through a natural gas sales pipeline.

4. *Alternatives Considered*: In addition to the proposed action, the Department considered the "no-action" alternative. The "no-action" alternative would deny issuance of the MAQP to the proposed facility. However, the Department does not consider the "no-action" alternative to be appropriate because WBI 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 BACT analysis, would be included in MAQP #2954-03.

6. *Regulatory Effects on Private Property*: The Department considered alternatives to the conditions imposed in the 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
Terrestrial and Aquatic Life and Habitats			X			Yes
Water Quality, Quantity, and Distribution			X			Yes
Geology and Soil Quality, Stability and Moisture			X			Yes
Vegetation Cover, Quantity, and Quality			X			Yes
Aesthetics			X			Yes
Air Quality			X			Yes
Unique Endangered, Fragile, or Limited Environmental Resources			X			Yes
Demands on Environmental Resource of Water, Air and Energy			X			Yes
Historical and Archaeological Sites			X			Yes
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

Minor impacts to terrestrial and aquatic life and habitats would be expected from the proposed project because deer, antelope, coyotes, geese, ducks, and other terrestrials would potentially use the area around the facility, and the addition of one engine to an existing facility would result in minor additional impacts to surroundings. Additionally, there are no known wetlands listed for the project site. Any construction would result in very little impact, if any, on the terrestrial and aquatic life and habitats because there would be minimal disturbance and any disturbance would be temporary and of short duration. Therefore, the Department believes that the proposed project would cause minor impacts to the area and overall, the impacts from this project to terrestrial and aquatic life and habitats would be minor.

B. Water Quality, Quantity, and Distribution

The current permit action would remove two compressor engines and add one smaller compressor engine. MAQP #2954-03 would expect a slight increase in emissions of all criteria pollutants at an existing site. However, emissions would be limited based on conditions and limitations in the MAQP. WBI would be required to add the appropriate control technology (oxidation catalyst) to minimize emissions. Unaltered hydrostatic test water may be discharged on-site. Water may be required for dust control, and additional water may be required for dust suppression during installation of equipment. There are no known surface water bodies on the site. The facility employs very few people and the amount of water for consumptive and non-consumptive use would be minimal. Therefore, the proposed permit would result in minor impacts to water quality, quantity, and distribution in the area.

C. Geology and Soil Quality, Stability, and Moisture

Impacts to the geology and soil quality, stability, and moisture from this facility would be minor because the permit action would impact a relatively small portion of land and the amount of resulting deposition of the air emissions would be small. There are no known unique geologic or physical features at the site. The soil stability in the immediate vicinity would be impacted by construction activities, but disturbances would be temporary. Installing the equipment, at an existing facility, would result in minimal impact on geology and soil quality, stability and moisture because the construction would be temporary and of short duration. Overall, the Department believes there would be minor impacts to geology, soil quality, stability, and moisture.

D. Vegetation Cover, Quantity, and Quality

The proposed project would result in minor impacts on the vegetative cover, quantity, and quality in the immediate area because only a small amount of property would be disturbed and the resulting deposition from air emissions would be relatively small. The new engine would be installed and operated at an existing facility. There are no known endangered or threatened plant species at the project site. This permit would result in minimal disturbance to the land and any disturbance would be temporary. Most of the newly disturbed areas would be restored to their previous status after installation of equipment. The corresponding deposition of the air pollutants on the surrounding vegetation would also be minor. Therefore, the proposed project would result in minor impacts on the vegetative cover, quantity, and quality.

E. Aesthetics

Impacts to the aesthetics of the area from this modification would be minor because the land use would predominantly remain the same. According to WBI, the nearest home or structure is located approximately 500 feet away.

Visible emissions from the facility would be limited to 20% opacity. There would not be an increase in odors with the change of equipment. The proposed change could result in some additional noise during construction. The area would receive very little increase in vehicle use as a result of the proposed project. Most vehicles would use the existing roads in the area on route to the roads established as part of the facility. Obviously during construction and installation of the proposed engine at the existing facility, there might be a noticeable increase in traffic; but any additional increase in traffic would be temporary.

Impacts to the aesthetics of the area from the project would be minor because of the industrial nature of the area, the relatively low visibility and minimal noise from the addition of the compressor engine. Therefore, the Department believes that aesthetics in the area would only experience minor impacts.

F. Air Quality

The Department determined, based on the allowable emissions this facility may emit that the impacts from this permitting action will be minor. The Department believes it will not cause or contribute to a violation of any ambient air quality standard.

The air quality classification of the immediate area is "Unclassifiable/Attainment" for all pollutants (40 CFR Part 81.327). Air emissions from the facility would be minimized by limitations and conditions that would be included in MAQP #2954-03. Conditions would include, but would not be limited to, BACT emission limits and opacity limitations on the proposed engine and the general facility. In addition, based on previous analysis of sources of this type operating under similar conditions, the Department believes that the emissions resulting from the proposed engines exhibit good dispersion characteristics resulting in lower deposition impacts to the affected area. Since controlled potential emissions from the proposed station would exhibit good dispersion characteristics, the Department determined that controlled emissions from the source would not cause or contribute to a violation of any ambient air quality standard. Therefore, any impacts to air quality from the proposed facility would be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

In an effort to identify any unique endangered, fragile, or limited environmental resources in the area, the Department contacted the Montana Natural Heritage Program, Natural Resource Information System (NRIS). In this case, the project area was defined by the section, township, and range of the proposed location with an additional 1-mile buffer zone. The NRIS search identified a single known species of special concern. The Greater Sage-Grouse, a vertebrate animal was listed as Sensitive. Due to the minor amounts of construction that would be required, the relatively low levels of pollutants that would be emitted, the Department determined that it would be unlikely that the proposed project would impact any species of special concern and that any potential impacts would be minor. Therefore, the Department believes there would be minor impacts to any unique, endangered, fragile, or limited environmental resources in the area.

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

The proposed project would have minor impacts on the demands for the environmental resources of air and water because the permit action would be a source of air pollutants. However, as explained in Section 7.F of this EA, the Department determined that the project would place very minor demands on air, water, and energy in order to provide compression to facilitate the transportation of natural gas in the natural gas pipeline. Minor effects would be expected on resources of water, air, and energy.

I. Historical and Archaeological Sites

In an effort to identify any historical and archaeological sites located near the project area, the Department previously contacted the Montana Historical Society, State Historic Preservation Office (SHPO). According to SHPO records, there are no previously recorded historic or archaeological sites within the proposed operational area of this facility. According to SHPO records, several cultural resource inventories have been done within the defined area and that a recommendation for an additional cultural resource inventory is unwarranted. It is unlikely that any cultural properties would be impacted by the proposed project and an additional cultural resource inventory would be unwarranted at this time. Overall, the Department determined that it is unlikely that the proposed project would have any impact on any historical and archaeological site.

J. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts on the physical and biological aspects of the human environment in the immediate area would be minor due to the relatively small size of the project and little construction activities associated with this project. 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 #2954-03.

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
	Social Structures and Mores			X			Yes
	Cultural Uniqueness and Diversity			X			Yes
	Local and State Tax Base and Tax Revenue			X			Yes
	Agricultural or Industrial Production			X			Yes
	Human Health			X			Yes
	Access to and Quality of Recreational and Wilderness Activities			X			Yes
	Quantity and Distribution of Employment			X			Yes
	Distribution of Population			X			Yes
	Demands for Government Services			X			Yes
	Industrial and Commercial Activity			X			Yes
	Locally Adopted Environmental Plans and Goals				X		Yes
	Cumulative and Secondary Impacts			X			Yes

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

A. Social Structures and Mores

Additional activity (vehicle traffic, construction equipment, etc.) would be noticeable during facility construction; however, compressor stations typically do not require day-to-day employees and once the facility is constructed, activities associated with the operation of the facility would be minor. The proposed project would take place in a relatively remote location. The proposed project would not cause a disruption to any native or traditional lifestyles or communities in the area because the land use would not be out of place given the industrial use of the surrounding area. Therefore, on impacts to social structure and mores would be expected.

B. Cultural Uniqueness and Diversity

The operation of a compressor station requires relatively few employees for normal operations and the current action would likely not result in any additional employees, therefore immigration of new people to the area for employment purposes would not likely occur. Further, the proposed activity would not alter the surrounding land use. Therefore, any impact on the cultural uniqueness and diversity would not be expected.

C. Local and State Tax Base and Tax Revenue

The proposed project would result in minor impacts to the local and state tax base and tax revenue because few, if any new employees would be expected as a result of constructing the facility. Further, the proposed project would necessitate relatively little construction and typically would not require an extended period of time for completion; therefore, any construction related jobs would be temporary and any corresponding impacts on the tax base/revenue of a given area would be minor. In addition, compressor operations of this type are common within the local area, and this area of Montana in general; therefore, because the proposed station constitutes a common industrial entity, any impacts to the local and state tax base and tax revenue would be minor.

D. Agricultural or Industrial Production

The land at the proposed location is rural oil and gas production. The project would take place within the boundaries of an existing privately owned site. Because the permit action would result in minor changes to the existing facility, impacts to agricultural production would not be expected. The proposed project would have minor impacts to industrial production because an additional engine would be located at an existing industrial area. Overall, any impacts to agricultural or industrial production of the area would be minor.

E. Human Health

The proposed project would result in minor, if any, impacts to human health. As explained in Section 7.F of this EA, 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 facility. The proposed project would have minor impacts on the quality of recreational and wilderness activities in the area because the facility, while relatively small by industrial standards, would be visible and would produce noise. The proposed engine would locate at an existing, operational facility and the Department has determined that overall, any impacts to the access to and quality of recreational and wilderness activities in the area would expect to be minor.

G. Quantity and Distribution of Employment

No additional employment would likely occur as a result of the proposed activity, therefore any change to the quantity and distribution of employment would expect to be minor.

H. Distribution of Population

The proposed project would have minor, if any, impacts on the above social and economic resources because two permanent employees would be required for normal operations thereby resulting in relatively few, if any, new immigration to the area. In addition, temporary construction-related positions would 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 relatively short time period that would be required for constructing the facility. Overall, any impacts to the above social and economic resources in the area would be expected to be minor.

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 #2954-03 and to assure compliance with applicable rules, standards, and conditions contained in MAQP #2954-03. The increase in vehicle traffic would occur primarily during facility construction because compressor stations typically do not require day-to-day employees. Therefore, vehicle traffic would be relatively minor due to the relatively short time period that would be required to construct the facility. Overall, any demands for government services to regulate the facility or activities associated with the facility would expect to be minor due to the relatively small size of the facility.

J. Industrial and Commercial Activity

The proposed project would be relatively small and would take place at a relatively remote location. 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.

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.

L. Cumulative and Secondary Impacts

Overall, the cumulative and secondary impacts from this project on the social and economic aspects of the human environment would be minor because few employment opportunities may result, state and local taxes might be generated from the facility but little change would result from the permit. Overall, the project would result in few additional jobs for the area. The emissions' increase that would result from this permit would be minimal and therefore would result in few cumulative or secondary impacts. 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 #2954-03.

Recommendation: No EIS is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permit action is for the construction and operation of a natural gas central compressor station. This EA assesses the impacts specific to the proposed project. MAQP #2954-03 would include conditions and limitations to ensure the facility would operate in compliance with all applicable air quality rules and regulations. In addition, there are no significant impacts associated with the proposed project.

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: Montana Department of Environmental Quality; Montana Historical Society – State Historic Preservation Office; Natural Resource Information System – Montana Natural Heritage Program.

EA prepared by: R. Payne
Date: June 23, 2014