AIR QUALITY PERMIT

Issued To:	MCR, LLC P.O. Box 716 Shelby, MT 59474	Permit: #3128-01 Administrative Amendment (AA) Received: 12/23/05 Department Decision on AA: 8/01/06 Permit Final: 8/17/06 AFS: #101-0022

An air quality permit, with conditions, is hereby granted to MCR, LLC (MCR), 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

The compressor station is located in the NW¼ of Section 21, Township 36 North, Range 2 East, in Toole County, Montana. The facility consists of a White Superior 1100 Hp Engine; 0.096 MMBtu/h Heater; 0.375 MMBtu/h Glycol dehydrator reboiler; and associated equipment.

B. Current Permit Action

On December 23, 2005, the Department of Environmental Quality – Air Resources Management Bureau (Department) received a request to change the name of the operator of the facility from Fulton Fuel Company to MCR, LLC. The current permit action changes the operator name on Permit #3128-00 and updates the permit to reflect the current permit language and rule references used by the Department. Permit #3128-01 replaces Permit #3128-00.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Emissions from the White Superior 1100 Hp 6GTLE Compressor Engine shall not exceed the following (ARM 17.8.749 and ARM 17.8.752):

NO_x	4.85 lb/hr
CO	7.28 lb/hr
VOC	2.43 lb/hr

2. MCR 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).

3. MCR 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).

4. MCR 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.4 (ARM 17.8.749).

B. Testing Requirements

1. MCR shall test the White Superior 1100 Hp 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. Testing shall be conducted within 180 days of issuance of permit #3128-00 and shall continue on an every-4-year basis or another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).

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

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

C. Operational Reporting Requirements

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

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

   In addition, MCR shall submit the following information annually to the Department by the date specified in the annual emission inventory request. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

   a. Amount of fuel consumed by the White Superior natural gas compressor engine (corrected to 14.7 psia and 60°F)
   b. Number of operation-hours per year of this compressor engine
   c. Number of the reboiler operation-hours per year (or 8760 hours will be used)
   d. Number of heater operation-hours per year (or 8760 hours will be used)

2. MCR shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include 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 MCR 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 – MCR shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if MCR fails to appeal as indicated below.

C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving MCR of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq*. (ARM 17.8.756).

D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement action as specified in Section 75-2-401, *et seq*., MCA.

E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If the Board does not issue a stay, the Department's decision on the application is final 16 days after the Department's decision is made.

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by MCR may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

H. Construction Commencement – Construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis
MCR, LLC
Permit #3128-01

I. Introduction/Process Description

MCR, LLC (MCR) owns and operates a gas compressor station. The facility is located in Section 21, Township 36 North, Range 2 East, in Toole County, Montana.

A. Permitted Equipment

The compressor station consists of the following equipment:

(1) 1979 White Superior 6GTL 1100-hp compressor engine;
(1) Dehydrator, 0.375 MMBtu/hr;
(1) 0.096-MMBtu/hr Heater;
(1) Methanol tank 250 bbls and associated equipment.

B. Source Description

The plant includes an assemblage of buildings, major equipment, controls and auxiliaries to implement the required processing for the natural gas stream for storage in a reservoir and its subsequent withdrawal from storage and processing to meet sales gas specifications.

MCR compresses pipeline gas for further transport to major market areas. This facility also removes the moisture from the gas during the process. This is accomplished with a dehydrator, also commonly called a reboiler or glycol unit.

C. Permit History

On August 8, 2000, Fulton Fuel Company (Fulton) submitted an application for a preconstruction permit to operate a natural gas compressor station. This facility has been operating since 1980. This application resulted in the issuance of permit **#3128-00**.

D. Current Permit Action

On December 23, 2005, the Department of Environmental Quality – Air Resources Management Bureau (Department) received a request to change the name of the operator of the facility from Fulton to MCR, LLC. The current permit action changes the operator name on Permit #3128-00 and updates the permit to reflect the current permit language and rule references used by the Department. Permit **#3128-01** replaces Permit #3128-00.

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. <u>ARM 17.8.101 Definitions</u>. 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).

   MCR 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}

MCR must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, MCR shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.

5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of 1 pound of sulfur per million Btu fired. (5) Commencing July 1, 1971, no person shall burn any gaseous fuel containing sulfur compounds in excess of 50 grains per 100 cubic feet of gaseous fuel, calculated as hydrogen sulfide at standard conditions. MCR will consume pipeline-quality natural gas in the compressor engines, the dehydration unit, and the space heaters to 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). This facility is not an NSPS affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR 60.

   MCR is not an NSPS affected source because it does not meet the definition of a natural gas processing plant defined in 40 CFR 60, Subpart KKK. In addition, 40 CFR 60, Subpart LLL is not applicable to MCR because the facility does not utilize a sweetening unit to process sour gas.

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:

   - Subpart HH – National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.
   - Subpart HHH – National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities

   Based on the information submitted by MCR, the facility is not subject to the provisions of 40 CFR Part 63, because the facility is not a major source of HAPs.

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. MCR must demonstrate compliance with the ambient air quality standards with a stack height that does not exceed Good Engineering Practices (GEP). The proposed height of the new or altered stack for MCR is below the allowable 65-meter GEP stack height.

E. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. The current permit action is considered an administrative amendment; therefore, a permit fee was not required.

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

   An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that prorate the required fee amount.

F. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tons per year of any pollutant. MCR has a PTE greater than 25 tons per year of NOx, VOC, and 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 program.

4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.

5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. MCR was not required to submit a permit application because the current action is considered an Administrative Amendment. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. The current permit action is an Administrative Amendment; therefore, did not require publication.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary

to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

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

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

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

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

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

13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.

14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.

G. ARM 17.8, Subchapter 8 – Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.

2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since this facility is not a listed source and the facility's PTE is below 250 tons per year of any pollutant (excluding fugitive emissions).

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 hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{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 Air Quality Permit #3128-01 for MCR, the following conclusions were made.

   a. The facility's PTE is less than 100 tons/year for any pollutant.

   b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year for all HAPs.

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

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

   e. This facility is not subject to any current NESHAP standards.

   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 MCR will be a minor source of emissions as defined under Title V.

III. BACT Determination

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

IV. Emission Inventory

	Emissions in Tons/Year					
Source	TSP	PM-10	NOx	CO	VOC	SOx
1979 White Superior 1100-hp Compressor Engine	0.409	0.409	21.25	31.87	10.62	0.025
ALCO Dehydrator Reboiler and Still Vent	0.001	0.001	0.02	13.80	0.001	0.000
Natural Gas-Fired Heater	1.310	1.310	43.80	8.76	2.300	0.260
Totals	1.72	1.72	65.07	54.43	12.921	0.285

White Superior 1100-hp Compressor Engine 8GTL

Power 1100 bhp
Number of Hours of Operation = 8760h/yr
Fuel Consumption 8500 Btu/hp-h = 8.5 exp-3 MMBtu/hp-h
Natural Gas Heat Content = 1000 MMBtu/MMSCF
Calculated Yearly Fuel Usage = 8.5 exp-3 MMBtu/ hp-h * 8760 h/yr * 1100 hp / 1000 MMBtu/MMSCF = 81.906 MMSCF/yr

TSP Emissions
The emission factor for the TSP is the same as for PM-10. No particles of size greater than 10 microns are expected to be associated with the emissions form this engine.

PM-10 Emissions
Emission Factor: 10.0 lb/MMSCF (Fire Version 5.0, 8/95 2-02-002-02)
Control Efficiency: 0%
Calculations: E(PM-10) = 10.0 lb/MMSCF * 81.906 MMSCF/yr * 0.0005 ton/lb = 0.409 ton/yr.

NO_x Emissions:
Emission Factor: 2.0 g/hp-hr (Revised BACT Guidelines, 12/13/93)
Control: 0%
Calculations: E (NO_x) = 2.0 g/hp-h * 1100 hp * 8760 h/yr * 0.002205 lb/g * 0.0005 ton/lb = 21.25 ton/yr

CO Emissions:
Emission Factor: 3.0 g/hp-h (Revised BACT Guidelines, 12/13/93)
Control: 0%
Calculations: E(CO) = 3.0 g/hp-h * 1100 hp * 8760 h/yr * 0.002205 lb/g * 0.0005 ton/lb = 31.87 ton/yr

SO_x Emissions
Emission Factor: 0.6 lb/MMSCF (Fire Version 5.0, 8/95 2-02-002-02)
Control: 0%
Calculations: E(SO_x)= 0.6 lb/MMSCF * 81.906 MMSCF/yr * 0.0005 ton/lb = 0.0246 ton/yr

VOC Emissions:
Emission Factor: 1.0 g/bhp-h (Revised BACT Guidelines, 12/13/93)
Control: 0%
Calculations: E(VOC) = 1.0 g/hp-hr * 1100 hp * 8760 h/yr * 0.002205 lb/g * 0.0005 ton/lb = 10.62 ton/y

Glycol Dehydrator Reboiler and Still Vent 0.375 MMBtu/h:
Fuel Combustion Rate = 0.375 MMBtu/h
Numbers of Hours of Operation = 8760 h/yr
Heat Content of Natural Gas = 000 MMBtu/MMSCF
Fuel usage: 0.375 MMBtu/h / 1000 MMBtu/MMSCF = 3.75 exp-4 MMSCF/h

TSP Emissions:
TSP emission will be equal to the PM-10 emissions, because no particles larger than 10 microns in diameter are expected to be emitted from this reboiler.

PM-10 Emissions:
Emission Factor: 7.6 lb/MMSCF (AP 42 Table 1.4-2; 7/98)
Control: 0%
Calculations: E(PM-10) = 7.6 lb/MMSCF * 3.75 exp-5 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 0.00125 ton/yr

NO_x Emissions:
Emission Factor: 100, 000 lb/MMSCF (AP 42 Table 1.4-2; 7/98)
Control: 0%
Calculations: 100,000.lb/MMSFS * 3.75 exp-5 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 0.02 ton/yr

VOC Emissions:
Emission Factor: 5.5 lb/MMSFC (AP 42 Sec.1.4-2, 3/98)
Control: 0%
Calculations: 5.5 lb/MMSFC * 3.75 exp-5 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 0.0009 ton/yr

SO_x Emissions:
Emission Factor: 0.6 lb/MMSCF (AP 42 Sec.1.4-2, 3/98)
Control: 0%
Calculations: 0.6 lb/MMSCF * 3.75 exp-5 MMSCF/h * 8760 h/yr* 0.0005 ton/lb = 0.0001 ton/yr

CO Emissions:
Emission Factor: 84,000 lb/MMSCF (AP 42 Sec.1.4-2, 3/98)
Control: 0%
Calculations: 84,000 lb/MMSCF * 3.75 exp-5 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 13.80 ton/yr

Natural Gas Heater
Maximum Heat Generation = 100 MMBtu/hr
Numbers of Hours of = 8760 h/yr
Heat Content of Natural Gas = 1000 MMBtu/MMSCF
Fuel usage: 100 MMBtu/h / 1000 MMBtu/MMSCF = 0.1 MMSCF/h

TSP Emissions:
TSP emission will be equal to the PM-10 emissions, because no particles larger than 10 microns in diameter are expected to be emitted from reboiler

PM-10 Emissions:
Emission Factor: 3.0 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)
Control: 0%
Calculations: 3.0 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 1.31 ton/yr

NO_x Emissions:
Emission Factor: 100.00 lb/MMSC (Fire Version 5.0, SCC 10500106; 9/95)
Control: 0%
Calculations: 100.00 lb/MMSC * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb =43.8 ton/yr

VOC Emissions:
Emission Factor: 5.3 lb/MMCSF (Fire Version 5.0, SCC 10500106; 9/95)
Control: 0%
Calculations: 5.3 lb/MMCSF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 2.3 ton/yr

SO_x Emissions:
Emission Factor: 0.60 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)
Control: 0%
Calculations: 0.60 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 0.26 ton/yr

CO Emissions:
Emission Factor: 20.00 lb/MMSCF (Fire Version 5.0, SCC 10500106; 9/95)
Control: 0%
Calculations: 20.00 lb/MMSCF * 0.1 MMSCF/h * 8760 h/yr * 0.0005 ton/lb = 8.76 ton/yr

V. Existing Air Quality

The legal description of the site location is Section 21, Township 36 North, Range 2 East, in Toole County, Montana. The air quality of this area is classified as either Better than National Standards or unclassifiable/attainment of the National Ambient Air Quality Standards (NAAQS) for criteria pollutants.

VI. Ambient Air Impact Analysis

The Department determined, based on ambient air modeling, 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.

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.

VIII. Environmental Assessment

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

Analysis Prepared By: Robert Gallagher
Date: 7/31/06