

Air Quality Permit

Issued To: Bitter Creek Pipelines, L.L.C. CX24 Battery WBI Holdings, Inc. P.O. Box 131 Glendive, MT 59330	Permit #3036-05 Administrative Amendment Request Received: 04/27/05 Department Decision on Administrative Amendment: 05/26/05 Permit Final: 06/11/05 AFS Number: 003-0007
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An air quality permit, with conditions, is hereby granted to Bitter Creek Pipelines, L.L.C. (Bitter Creek), 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 Bitter Creek CX24 Battery natural gas compressor station is located north/northwest of Montana State Highway 314, approximately 2 miles northwest of Decker, Montana. The legal description of the site is the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 24, Township 9 South, Range 39 East, in Big Horn County, Montana.

B. Current Permit Action

On April 27, 2005, the Department of Environmental Quality (Department) received a letter from Bitter Creek requesting changes to Air Quality Permit #3036-04. The proposed change includes the addition of a 400-horsepower (hp) F18GL Waukesha lean burn compressor engine at the CX24 Battery. The potential emissions from the proposed equipment are less than the de minimis threshold of 15 tons per year. The permit action will update the Permit Analysis with the new equipment. An emission inventory for the Bitter Creek CX24 Battery is contained in Section IV of the Permit Analysis.

Section II: Limitations and Conditions

A. Emission Limitations and Control Requirements

1. Emissions from Source #01 and #02, the 380-hp Caterpillar natural gas compressor engines, shall be controlled with the use of NSCR and an AFR controller. Emissions from each unit shall not exceed the following (ARM 17.8.752):

NO _x	1.68 lb/hr
CO	2.51 lb/hr
VOC	0.84 lb/hr

2. Emissions from Source #03, the 400-hp Waukesha natural gas compressor engine, shall be controlled with the use of lean burn technology. Emissions from the unit shall not exceed the following (ARM 17.8.749):

NO _x	1.76 lb/hr
CO	2.65 lb/hr
VOC	0.88 lb/hr

3. Bitter Creek shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any sources installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304).
4. Bitter Creek shall not cause or authorize emissions to be discharged into the atmosphere from haul roads, access roads, parking lots, or the general plant property without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
5. Bitter Creek shall treat all unpaved portions of the access roads, parking lots, and general plant area with fresh 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. Sources #01 and #02, the 380-hp Caterpillar natural gas compressor engines, and Source #03, the 400-hp Waukesha natural gas compressor engine, shall be tested and compliance demonstrated with the nitrogen oxides (NO_x) and carbon monoxide (CO) emission limitations contained in Section II.A.1 and II.A.2, respectively, within 180 days of initial start-up of each engine. Testing shall continue on an every four-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105 and 17.8.749).
2. All compliance source tests shall be conducted in accordance with 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. Bitter Creek 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 Section I of the Permit Analysis.

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

2. Bitter Creek shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(1), 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 it's 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 Bitter Creek as a permanent business record for at least five 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 – Bitter Creek 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 Bitter Creek fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Bitter Creek 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 it's decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.

- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Bitter Creek may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).

Permit Analysis
Bitter Creek Pipelines, L.L.C.
CX24 Battery
Permit #3036-05

I. Introduction/Process Description

A. Permitted Equipment and Facilities

The Bitter Creek Pipelines, L.L.C. (Bitter Creek) CX24 Battery facility includes two rich burn 380-horsepower (hp) Caterpillar natural gas compressor engines utilizing non-selective catalytic reduction (NSCR) and an air to fuel ratio (AFR) controller and three 400-hp Waukesha lean burn natural gas compressor engines.

B. Source Description

Natural gas is gathered in the field (wells) and transferred, via flowlines, to the meterhouse where it is again transferred to the compressor stations. From the compressor stations, the gas is metered and sent to central treating and compression.

C. Permit History

On January 29, 2000, Redstone Gas Partners, L.L.C. (Redstone) was issued **Permit #3036-00** for the operation of the CX24 Battery natural gas compressor station. The CX24 Battery was permitted to operate at a location north/northwest of Montana State Highway 314, approximately 2 miles northwest of Decker, Montana. The legal description of the site location was within the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 24, Township 9 South, Range 39 East, in Big Horn County, Montana. The compressor station included two 380-hp Caterpillar natural gas compressor engines utilizing NSCR and an AFR controller.

On September 27, 2000, the Department of Environmental Quality (Department) received a permit modification request letter from Redstone. After construction of the CX24 Battery compressor station, Redstone realized a discrepancy in the permitted versus actual location of the station. The initial application submitted to the Department on December 23, 1998, incorrectly referenced the proposed site location within the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 24, Township 9 South, Range 39 East, in Big Horn County, Montana. The correct legal description of the station is within the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 24, Township 9 South, Range 39 East, in Big Horn County, Montana, approximately 1500 - 2000 feet west of the initial permitted site location. **Permit #3036-01** properly identified the CX24 Battery compressor station site location and replaced Permit #3036-00.

On January 5, 2001, the Department received a permit change request from Redstone. The change involved the addition of a lean burn 400-hp Waukesha natural gas compressor engine to equipment previously permitted at the facility. Because the Waukesha engine utilizes lean burn technology, potential emissions do not exceed the de minimis threshold of 15 tons per year and the permit action was accomplished in accordance with the Administrative Rules of Montana (ARM) 17.8.705 (1)(r). Calculations demonstrating compliance with ARM 17.8.705(1)(r) are contained in Section IV of the Permit Analysis. **Permit #3036-02** replaced Permit #3036-01.

On April 5, 2001, Redstone submitted a request to transfer ownership of Permit #3036-02 from Redstone to Bitter Creek. The permit action reflected the change requested by Redstone and Bitter Creek. **Permit #3036-03** replaced Permit #3036-02.

On April 1, 2004, the Department received a letter from Bitter Creek requesting changes to Permit #3036-03. The proposed change includes the addition of a 400-hp Waukesha F18GL lean burn compressor engine at the CX24 Battery. The potential emissions from the proposed equipment are less than the de minimis threshold of 15 tons per year. The permit action updated the Permit Analysis with the new equipment. An Emission Inventory for the Bitter Creek CX24 Battery was contained in Section IV of the Permit Analysis. **Permit #3036-04** replaced Permit #3036-03.

D. Current Permit Action

On April 27, 2005, the Department received a letter from Bitter Creek requesting changes to Air Quality Permit #3036-04. The proposed change includes the addition of a 400-hp Waukesha F18GL lean burn compressor engine at the CX24 Battery. The potential emissions from the proposed equipment are less than the de minimis threshold of 15 tons per year. The permit action will update the Permit Analysis with the new equipment. An Emission Inventory for the Bitter Creek CX24 Battery is contained in Section IV of the Permit Analysis. **Permit #3036-05** replaces Permit #3036-04.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the 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).

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

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly, by telephone, whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than four hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Bitter Creek 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, Bitter Creek shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.
3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this rule.

4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause, allow, or permit to be discharged into the atmosphere particulate matter in excess of the amount set forth in this rule.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. (4) Commencing July 1, 1972, no person shall burn liquid or solid fuels containing sulfur in excess of one pound of sulfur per 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. Bitter Creek burns natural gas in its fuel burning equipment, which meets this limitation.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such 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.
8. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories. The source, as defined and applied in 40 CFR 63, shall comply with the requirements of 40 CFR 63, as listed below:

40 CFR 63, Subpart HH - National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities. Owners or operators of oil and natural gas production facilities, as defined and applied in 40 CFR Part 63, shall comply with the applicable provisions of 40 CFR Part 63, Subpart HH. In order for a natural gas production facility to be subject to 40 CFR Part 63, Subpart HH requirements, certain criteria must be met. First, the facility must be a major source of hazardous air pollutants (HAPs) as determined according to paragraphs (a)(1)(i) through (a)(1)(iii) of 40 CFR 63, Subpart HH. Second, a facility that is determined to be major for HAPs must also either process, upgrade, or store hydrocarbon liquids prior to the point of custody transfer, or process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. Third, the facility must also contain an affected source as specified in paragraphs (b)(1) through (b)(4) of 40 CFR Part 63, Subpart HH. Finally, if the first three criteria are met, and the exemptions contained in paragraphs (e)(1) and (e)(2) of 40 CFR Part 63, Subpart HH do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HH. Based on the information submitted by Bitter Creek, the facility is not subject to the provisions of 40 CFR Part 63, Subpart HH because the facility is not a major source of HAPs.

40 CFR 63, Subpart HHH National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities. Owners or operators of natural gas transmission or storage facilities, as defined and applied in

40 CFR Part 63, shall comply with the standards and provisions of 40 CFR Part 63, Subpart HHH. In order for a natural gas transmission and storage facility to be subject to 40 CFR Part 63, Subpart HHH requirements, certain criteria must be met. First, the facility must transport or store natural gas prior to the gas entering the pipeline to a local distribution company or to a final end user if there is no local distribution company. In addition, the facility must be a major source of HAPs as determined using the maximum natural gas throughput as calculated in either paragraphs (a)(1) and (a)(2) or paragraphs (a)(2) and (a)(3) of 40 CFR Part 63, Subpart HHH. Second, a facility must contain an affected source (glycol dehydration unit) as defined in paragraph (b) of 40 CFR Part 63, Subpart HHH. Finally, if the first two criteria are met, and the exemptions contained in paragraph (f) of 40 CFR Part 63, Subpart HHH, do not apply, the facility is subject to the applicable provisions of 40 CFR Part 63, Subpart HHH. Based on the information submitted by Bitter Creek, the facility is not subject to the provisions of 40 CFR 63, Subpart HHH 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. Bitter Creek 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 Bitter Creek 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. Bitter Creek was not required to submit an application fee because the current permit action is considered administrative.
 2. ARM 17.8.505 When Permit Required--Exclusions. 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. Bitter Creek has a PTE greater than 25 tons per year of nitrogen oxides (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 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. The current permit action is an administrative amendment, and therefore, does not require the submittal of a permit application.
 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 BACT analysis is discussed 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 Bitter Creek of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
 10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an Environmental Impact Statement.

11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
14. ARM 17.8.765 Transfer of Permit. This rule states that an air quality permit may be transferred from one person to another if written notice of Intent to Transfer, including the names of the transferor and the transferee, is sent to the Department.

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

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modifications-- Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification, with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source 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 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 PM₁₀ in a serious PM₁₀ 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 #3036-05 for Bitter Creek, 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 PM₁₀ 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 Bitter Creek (Permit #3036-05) is a minor source of emissions as defined under Title V.

III. BACT Determination

A BACT determination is required for each new or altered source. Bitter Creek shall install on the new or altered source the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action is an administrative amendment and does not require a BACT analysis.

IV. Emission Inventory

Source		Tons/Year				
		PM ₁₀	NO _x	CO	VOC	SO _x
#01	Caterpillar Natural Gas Engine (380 hp)	0.13	7.34	11.01	3.67	0.01
#02	Caterpillar Natural Gas Engine (380 hp)	0.13	7.34	11.01	3.67	0.01
#03	Waukesha Natural Gas Engine (400 hp)	0.13	7.73	11.59	3.86	0.01
#04	Waukesha Natural Gas Engine (400 hp)	0.13	7.73	11.59	3.86	0.01
#05	Waukesha Natural Gas Engine (400 hp)	0.13	7.73	11.59	3.86	0.01
Total		0.65	37.87	56.79	22.59	0.05

(SOURCE #01 and #02)

Caterpillar Natural Gas Engine (380 hp)

Brake Horse Power: 380 hp
 Hours of Operation: 8,760 hr/yr
 Max Fuel Combustion Rate: 2.83 MMBtu/hr
 Fuel Heating Value: 1,050 Btu/SCF or 0.0011 MMSCF/MMBtu

PM₁₀ Emissions
 Emission Factor: 10.0 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
 Calculations: 10.0 lb/MMSCF * 0.001 MMSCF/MMBtu * 2.83 MMBtu/hr = 0.03 lb/hr
 0.03 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

NO_x Emissions
 Emission Factor: 2.00 g/hp-hr {BACT Determination}
 Calculations: 2.00 g/hp-hr * 380 hp * 0.002205 lb/gram = 1.68 lb/hr
 1.68 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 7.34 ton/yr

CO Emissions
 Emission Factor: 3.00 g/hp-hr {BACT Determination}
 Calculations: 3.00 g/hp-hr * 380 hp * 0.002205 lb/gram = 2.51 lb/hr
 2.51 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 11.01 ton/yr

VOC Emissions
 Emission Factor: 1.00 g/hp-hr {BACT Determination}
 Calculations: 1.00 g/hp-hr * 380 hp * 0.002205 lb/gram = 0.84 lb/hr
 0.84 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 3.67 ton/yr

SO_x Emissions
 Emission Factor: 0.60 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
 Calculations: 0.60 lb/MMSCF * 0.001 MMSCF/MMBtu * 2.83 MMBtu/hr = 0.00169 lb/hr
 0.00169 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.0074 ton/yr

(SOURCE #03, #04, and #05)

Waukesha Lean Burn Natural Gas Engine (400 hp)

Brake Horse Power: 400 hp
 Hours of Operation: 8,760 hr/yr
 Max Fuel Combustion Rate: 2.86 MMBtu/hr
 Fuel Heating Value: 1,050 Btu/SCF or 0.001 MMSCF/MMBtu

PM₁₀ Emissions
 Emission Factor: 10.0 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
 Calculations: 10.0 lb/MMSCF * 0.001 MMSCF/MMBtu * 2.86 MMBtu/hr = 0.03 lb/hr
 0.03 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr

NO_x Emissions
 Emission Factor: 2.00 g/hp-hr {BACT and De Minimis Determination}
 Calculations: 2.00 g/hp-hr * 400 hp * 0.002205 lb/gram = 1.76 lb/hr
 1.76 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 7.73 ton/yr

CO Emissions
 Emission Factor: 3.00 g/hp-hr {BACT and De Minimis Determination}
 Calculations: 3.00 g/hp-hr * 400 hp * 0.002205 lb/gram = 2.65 lb/hr
 2.65 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 11.59 ton/yr

VOC Emissions
 Emission Factor: 1.00 g/hp-hr {BACT and De Minimis Determination}
 Calculations: 1.00 g/hp-hr * 400 hp * 0.002205 lb/gram = 0.88 lb/hr
 0.88 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 3.86 ton/yr

SO_x Emissions
 Emission Factor: 0.60 lb/MMSCF {FIRE, PC Version, 1/95, 2-02-002-02}
 Calculations: 0.60 lb/MMSCF * 0.001 MMSCF/MMBtu * 2.86 MMBtu/hr = 0.0017 lb/hr
 0.0017 lb/hr * 8,760 hr/yr * 0.0005 ton/lb = 0.0075 ton/yr

V. Ambient Air Quality Impacts

The surrounding area is listed as attainment/unclassified for the National Ambient Air Quality Standards (NAAQS). The facility is not expected to cause or contribute to any exceedances of the ambient air quality standards.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the Department conducted a private property taking and damaging assessment and determined there are no taking or damaging implications.

VII. Environmental Assessment

The current permit action is an Administrative Action and does not require an Environmental Assessment.

Analysis prepared by: Chris Ames

Date: May 5, 2005