

## Air Quality Permit

Issued To: Bitter Creek Pipelines, L.L.C.  
Shell 33 Creek Battery  
WBI Holdings, Inc.  
P.O.Box 131  
Glendive, MT 59330

Permit #3119-01  
Modification Request Received: 04/05/01  
Department Decision on Modification: 04/27/01  
Permit Final: 05/13/01  
AFS Number: 003-0012

An air quality permit, with conditions, is hereby granted to Bitter Creek Pipelines, L.L.C. – Shell 33 Creek Battery (Bitter Creek) natural gas compressor station pursuant to Sections 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and Administrative Rules of Montana (ARM) 17.8.701, et seq., as amended, for the following:

### Section I: Permitted Facilities

- A. Plant Location: The Shell 33 Creek Battery natural gas compressor station is located approximately 4.5 miles northwest of Decker, Montana. The legal description of the site location is the NE¼ of Section 33, Township 9 South, Range 39 East, Big Horn County, Montana. The compressor station includes two 400-bhp Waukesha natural gas compressor engines (Waukesha natural gas engines #1 and #2).
- B. Current Permit Action: On April 5, 2001, Redstone Gas Partners L.L.C. (Redstone) submitted a request to transfer ownership of permit #3119-00 from Redstone to Bitter Creek. The current permit action reflects the change requested by Redstone and Bitter Creek.

### Section II: Limitations and Conditions

#### A. Emission Limitations and Control Requirements

- 1. Emissions from each of the 400-bhp Waukesha gas compressor engines #1 and #2 shall be controlled with the use of lean burn engine technology. Emissions from each unit shall not exceed the following (ARM 17.8.715):

NO <sub>x</sub>	1.76 lb/hr
CO	2.65 lb/hr
VOC	0.88 lb/hr

- 2. 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).
- 3. 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).
- 4. 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.3 (ARM 17.8.710).

#### B. Testing Requirements

- 1. Bitter Creek shall test engine #1 and #2 for NO<sub>x</sub> and CO, concurrently, and demonstrate compliance with the NO<sub>x</sub> and CO emission limits contained in Section II.A.1. Testing shall be conducted within 180 days of initial start-up of each engine and continue on an every-4-year basis or according to another testing/monitoring schedule as may be approved by the Department of Environmental Quality (department) (ARM 17.8.105 and 17.8.710).

2. All 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 for calculating 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 17.8.705(1)(r) 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 17.8.705(1)(r)(iv) (ARM 17.8.705).
3. The records compiled in accordance with this permit shall be maintained by Bitter Creek as a permanent business record for at least 5 years following the date of the measurement, shall be submitted to the department upon request, and shall be available at the plant site for inspection by the department (ARM 17.8.710).

Section III. General Conditions

- A. Inspection - The recipient 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 all the terms, conditions, and matters stated herein shall be deemed accepted if the recipient fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations - Nothing in this permit shall be construed as relieving any permittee of the responsibility for complying with any applicable federal or Montana statute, rule or standard except as specifically provided in ARM 17.8.701, *et seq.* (ARM 17.8.717).
- D. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement 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 department's decision on the application is not final unless 15 days have elapsed and there

is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

- F. Permit Inspection - As required by ARM 17.8.716, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by department personnel at the location of the permitted source.
- G. 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.
- H. Permit Fees - Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, the continuing validity of this permit is conditional upon the payment by the permittee of an annual operation fee, as required by that Section and rules adopted thereunder by the Board.

Permit Analysis  
Bitter Creek Pipelines, L.L.C.  
Permit #3119-01

I. Introduction/Process Description

A. Permitted Equipment and Facilities

The Bitter Creek Pipelines, L.L.C. (Bitter Creek) facility incorporates two 400-bhp Waukesha natural gas compressor engines (engine #1 and #2). Emissions from each of the 400-bhp Waukesha natural gas compressor engines shall be controlled with the use of “lean burn” technology provided by Waukesha/Dresser, the manufacturer of the engine.

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 June 20, 2000, Redstone Gas Partners, L.L.C. (Redstone) submitted a complete air quality pre-construction permit application for a compressor station and associated equipment. The compressor station is located approximately 4.5 miles northwest of Decker, Montana. The legal description of the site location is the NE¼ of Section 33, Township 9 South, Range 39 East, Big Horn County, Montana. Permit #3119-00 was issued on July 7, 2000.

D. Current Permit Action

On April 5, 2001, Redstone submitted a request to transfer ownership of permit #3119-00 from Redstone to Bitter Creek. The current permit action reflects the change requested by Redstone and Bitter Creek. Permit **3119-01** will replace permit #3119-00.

E. Additional Information

Additional information, such as applicable rules and regulations, best available control technology (BACT) determinations, air quality impacts, and environmental assessments, is included in the analysis associated with each change to the permit.

II. Applicable Rules

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 of Environmental Quality (department). Upon request, the department will provide references for the location of any applicable rule or regulation or copies where appropriate.

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

1. 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.

2. 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 all 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.

3. ARM 17.8.110 Malfunctions. The department must be notified promptly by phone 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.
4. ARM 17.8.111 Circumvention. No person shall cause or permit the installation or use of any device or any means which, without resulting in a reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. No equipment that may produce emissions shall be operated or maintained in such a manner that a public nuisance is created.

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.206 Methods and Data
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide

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 to an 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. Under this section, 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 section 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 section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This section 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 section.

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

1. ARM 17.8.504 Air Quality Permit Application Fees. Bitter Creek shall 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 or fee for the current permit.

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. This 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 pro-rate the required fee amount.

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

1. ARM 17.8.704 General Procedures for Air Quality Preconstruction Permitting. An air quality preconstruction permit shall contain requirements and conditions applicable to both construction and subsequent use.
2. ARM 17.8.705 When Permit Required--Exclusions. This rule requires a facility to obtain an air quality permit or permit alteration if they construct, alter, or use an air contaminant source which has the potential to emit more than 25 tons per year of any pollutant. Bitter Creek has the potential to emit more than 25 tons per year of NO<sub>x</sub> and CO; therefore, a permit is required.
3. ARM 17.8.706 New or Altered Sources and Stacks--Permit Application Requirements. This rule requires that an application for an air quality permit be submitted for a new or altered source or stack. Bitter Creek was not required to submit an application for the current permit action.
4. ARM 17.8.710 Conditions for Issuance of Permit. This rule requires that the source demonstrate compliance with applicable rules and standards before a permit can be issued. Also, a permit may be issued with such conditions as are necessary to ensure compliance with all applicable rules and standards. Bitter Creek has demonstrated compliance with applicable rules and standards as required for permit issuance.
5. ARM 17.8.715 Emission Control Requirements. Bitter Creek is required to install on a new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. The BACT analysis is discussed in Section III of the permit analysis.
6. ARM 17.8.716 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.
7. ARM 17.8.717 Compliance with Other Statutes and Rules. 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 17.8.101, *et seq.*
8. ARM 17.8.720 Public Review of Permit Applications. This rule requires that Bitter Creek notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Bitter Creek was not required to submit an affidavit of publication for the current permit action.
9. ARM 17.8.731 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.

10. ARM 17.8.733 Modification of Permit. An air quality permit may be modified 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 in emissions because of those changed conditions. A source may not increase its emissions beyond those found in its permit unless the source applies for and receives another permit.

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

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

This facility is not a major stationary source because it is not listed and does not have the potential to emit more than 250 tons per year (excluding fugitive emissions) of any air pollutant.

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

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
  - a. Potential To Emit (PTE) > 10 tons/year of any one hazardous air pollutant (HAP), or PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the department may establish by rule.
  - b. PTE > 100 tons/year of any pollutant.
  - c. Sources with the PTE > 70 tons/year of PM-10 in a serious PM-10 non-attainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. 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 #3119-01 for Bitter Creek, the following conclusions were made.
  - a. The facility's PTE is less than 100 tons/year for all criteria pollutants.
  - b. The facility's PTE is less than 10 tons/year of any one HAP and less than 25 tons/year of all HAPs.
  - c. This source is not located in a serious PM-10 non-attainment area.
  - d. This facility is not subject to any current NESHAP standards.
  - e. This source is not a Title IV affected source nor a solid waste combustion unit.
  - f. This source is not an EPA designated Title V source.

The Bitter Creek facility (permit #3119-01) is not a major source and, thus, a Title V Operating Permit is not required.

### III. BACT Determination

A Best Available Control Technology (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 which is technically practicable and economically feasible, except that BACT shall be utilized. The current permit action does not address any new or altered source, therefore, a BACT analysis was not required.

### IV. Emission Inventory

Permit #3035-01

Source	Emissions in Tons/Year				
	PM-10	NO <sub>x</sub>	CO	VOC	SO <sub>x</sub>
Waukesha Engine #1 (400 bhp)	0.14	7.73	11.59	3.86	0.01
Waukesha Engine #2 (400 bhp)	0.14	7.73	11.59	3.86	0.01
Totals	0.28	15.45	23.18	7.73	0.02

(SOURCE #01)

#### Waukesha Natural Gas Compressor Engine (400 bhp)

Brake Horse Power = 400 bhp  
 Hours of Operation = 8,760 hr/yr  
 Max Fuel Combustion Rate = 2.86 MMBtu/hr  
 Fuel Heating Value = 950 Btu/SCF or 0.0011 MMSCF/MMBtu

#### PM-10 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 \* 8760 hr/yr \* 0.0005 ton/lb = 0.14 ton/yr

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

Emission Factor: 2.00 grams/bhp-hr {BACT Determination}  
 Calculations: 2.00 grams/bhp-hr \* 400 bhp \* 0.002205 lb/gram = 1.76 lb/hr  
 1.76 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 7.73 ton/yr

#### CO Emissions

Emission Factor: 3.00 grams/bhp-hr {BACT Determination}  
 Calculations: 3.00 grams/bhp-hr \* 400 bhp \* 0.002205 lb/gram = 2.65 lb/hr  
 2.65 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 11.59 ton/yr

#### VOC Emissions

Emission Factor: 1.00 grams/bhp-hr {BACT Determination}  
 Calculations: 1.00 grams/bhp-hr \* 400 bhp \* 0.002205 lb/gram = 0.88 lb/hr  
 0.88 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 3.86 ton/yr

#### SO<sub>x</sub> 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 = 0.002 lb/hr  
 0.002 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.01 ton/yr

(SOURCE #02)

#### Waukesha Natural Gas Compressor Engine (400 bhp)

Brake Horse Power: 400 bhp  
 Hours of Operation: 8,760 hr/yr  
 Max Fuel Combustion Rate: 2.86 MMBtu/hr  
 Fuel Heating Value: 950 Btu/SCF or 0.0011 MMSCF/MMBtu

#### PM-10 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 lbs/hr  
 0.03 lb/hr \* 8760 hr/yr \* 0.0005 ton/lb = 0.14 ton/yr

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

Emission Factor: 2.00 grams/bhp-hr {Department BACT Determination}



Calculations:  $2.00 \text{ grams/bhp-hr} * 400 \text{ bhp} * 0.002205 \text{ lb/gram} = 1.76 \text{ lb/hr}$   
 $1.76 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 7.73 \text{ ton/yr}$

CO Emissions

Emission Factor:  $3.00 \text{ grams/bhp-hr}$  {Department BACT Determination}  
Calculations:  $3.00 \text{ grams/bhp-hr} * 400 \text{ bhp} * 0.002205 \text{ lb/gram} = 2.65 \text{ lb/hr}$   
 $2.65 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 11.59 \text{ ton/yr}$

VOC Emissions

Emission Factor:  $1.00 \text{ grams/bhp-hr}$  {Department BACT Determination}  
Calculations:  $1.00 \text{ grams/bhp-hr} * 400 \text{ bhp} * 0.002205 \text{ lb/gram} = 0.88 \text{ lb/hr}$   
 $0.88 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.86 \text{ ton/yr}$

SO<sub>x</sub> Emissions

Emission Factor:  $0.60 \text{ lb/MMSCF}$  {FIRE, PC Version, 1/95, 2-02-002-02}  
Calculations:  $0.60 \text{ lb/MMSCF} * 0.001 \text{ MMSCF/MMBtu} * 2.83 \text{ MMBtu/hr} = 0.002 \text{ lb/hr}$   
 $0.002 \text{ lb/hr} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 0.01 \text{ ton/yr}$

V. Ambient Air Quality Impacts

The plant site is located within the NW¼ of Section 19, Township 9 South, Range 40 East, Big Horn 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. In the view of the department, the amount of controlled emissions from this facility will not cause an exceedance of any ambient air quality standard.

VI. Taking or Damaging Implication Analysis

As required by 2-10-101 through 105, MCA, the department has conducted a private property taking and damaging assessment and has 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: Julie Merkel

Date: April 27, 2001