

Air Quality Permit

Issued To: Basin Creek Equity Partners, LLC
65 East Broadway
Butte, MT 59701

Permit #3211-04
Administrative Amendment (AA) Request
Received: 11/29/05
Department Decision on AA: 3/31/06
Permit Final: 4/18/06
AFS #: 093-0018

An air quality permit, with conditions, is hereby granted to Basin Creek Equity Partners, LLC (Basin Creek), pursuant to Sections 75-2-204 and 211, 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

Basin Creek operates a nominal 54.9-megawatt (MW) electrical power generation facility incorporating nine (6.1 MW per engine) four-stroke, lean-burn, natural gas fired reciprocating internal combustion engines (RICE). The legal description of the site is Section 18, Township 2 North, Range 7 West, in Silver Bow County, Montana.

B. Current Permit Action

The Department of Environmental Quality (Department) received a letter dated November 28, 2005, from Basin Creek requesting the reference to the RICE be changed from low mass emitting units to exempt new units. The current permit action will change the reference to the RICE to exempt new units.

Section II: Limitations and Conditions

A. Emission Limitations and Control Requirements

1. Emissions from each RICE shall not exceed the following based on a 1-hour average (ARM 17.8.752):
 - i. NO_x¹ 14.4 lb/hr
 - ii. CO 5.10 lb/hr
 - iii. VOC 2.60 lb/hr
2. Basin Creek shall combust only pipeline quality natural gas for RICE operations (ARM 17.8.752).
3. Basin Creek shall install, operate, and maintain an oxidation catalyst on each RICE (ARM 17.8.752).
4. Basin Creek shall limit the combined RICE operation (9 engines total) to 34,200 hours during any rolling 12-month time period (ARM 17.8.749).

¹ NO_x reported as NO₂.

5. Basin 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).
6. Basin 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).
7. Basin Creek shall treat all unpaved portions of the access roads, parking lots, and 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 17.8.752).
8. Basin Creek shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements of the Acid Rain Program contained in 40 CFR 72-78 (40 CFR 72 through 40 CFR 78).

B. Testing Requirements

1. Basin Creek shall test each RICE for NO_x and CO, concurrently, within 180 days of initial start-up of the RICE or according to another testing/monitoring schedule as may be approved by the Department to demonstrate compliance with the NO_x and CO emission limits contained in Section II.A.1. The testing shall continue on an every 2-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 additional testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. Basin 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. Basin Creek shall document, by month, the combined hours of operation of the nine RICE. By the 25th day of each month, Basin Creek shall total the combined hours of operation of the nine RICE for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitations in Section II.A.4. The information for each of the previous months shall be submitted annually to the Department along with the annual emission inventory (ARM 17.8.749).
3. Basin 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 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).

4. The records compiled in accordance with this permit shall be maintained by Basin 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 17.8.749).

D. Notification

Basin Creek shall provide the Department with written notification of the following information within the specified time periods (ARM 17.8.749):

1. Commencement of construction of the power generation facility within 15 working days after beginning construction.
2. Actual start-up date of each RICE within 15 working days of the actual start-up of the RICE.

Section III: General Conditions

- A. Inspection – Basin 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 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 Basin 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 as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.

- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by the Department at the location of the source.
- G. Permit 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
Basin Creek Equity Partners, LLC
Permit #3211-04

I. Introduction/Process Description

A. Permitted Equipment

Basin Creek Equity Partners, LLC (Basin Creek), operates a nominal 54.9-megawatt (MW) electrical power generation facility incorporating nine (6.1 MW) four-stroke, lean-burn, natural gas fired reciprocating internal combustion engines (RICE). The legal description of the site is Section 18, Township 2 North, Range 7 West, in Silver Bow County, Montana.

B. Process/Source Description

The RICE produces electrical power by engine shaft rotation of an electric generator. The RICE will combust pipeline quality natural gas and will incorporate an oxidation catalyst (OxiCat) for the control of carbon monoxide (CO), Volatile Organic Compound (VOC), and Hazardous Air Pollutant (HAP) emissions. No add-on control will be incorporated for oxides of nitrogen (NO_x) emissions, as the combustion of pipeline quality natural gas in lean-burn RICE inherently results in low NO_x emissions and the limit of 34,200 combined operating hours per year will also reduce NO_x emissions. Further, the RICE will not incorporate add-on controls for sulfur dioxide (SO₂) and particulate matter less than 10 microns (µm) aerodynamic diameter (PM₁₀) emissions. Basin Creek is required by permit to combust only pipeline quality natural gas, which similar to the previously discussed inherent NO_x control, will result in reduced SO₂ and PM₁₀ emissions.

Under the federal Acid Rain Program, Basin Creek qualifies for a new unit exemption (40 CFR 72.7(b)(1)). Each of the nine RICE:

- Do not serve one or more generators with a total capacity greater than 25 Mwe. Each RICE serves a single and separate generator rated at 6.1 Mwe;
- Is not designed to burn coal or coal-derived fuels, except possibly coal-derived gaseous fuel;
- Combusts gaseous fuel (natural gas) which has an average sulfur content of no more than 0.05 percent by weight; and
- Does not have any allocated allowances.

Since NO_x emissions from each RICE are less than 100 tons per year (tpy) and Basin Creek has requested permit conditions limiting potential facility wide NO_x emissions, the facility is a minor source, as defined under the New Source Review Prevention of Significant Deterioration (NSR/PSD) permitting program.

C. Permit History

On November 19, 2002, Basin Creek Power Services, LLC (BCP) was issued final Montana Air Quality Permit #3211-00. Under the initial permitting action, BCP proposed the construction and operation of four nominal 23.9-MW simple cycle turbines to produce electrical power for the grid. The plant design scenario included two Pratt and Whitney FT8-1 twin pacs with each twin pac consisting of two simple cycle turbines and a single electric generator capable of combusting natural gas or distillate fuel oil #2. The electric generation system was permitted to operate as a “peaking unit” or “load following unit.” Emissions of NO_x from the turbines were

required by permit to be controlled with a water injection system that was an integral part of the design of the Pratt and Whitney FT8-1 units. In addition, BCP proposed the installation of a catalyst to control at least 80% of the CO emissions from each twin pack. The equipment permitted in Permit #3211-00 was never installed.

On March 3, 2003, BCP submitted a complete permit application for the replacement of the four previously permitted Pratt and Whitney natural gas fired simple-cycle turbines (95.6 MW combined capacity) with three RICE (48.3 MW combined capacity). Each RICE was equipped with an OxiCat and operated in a dual-fuel mode utilizing pipeline quality natural gas and distillate fuel oil #2. Under the permitting action, BCP requested federally enforceable permit conditions to limit the annual potential NO_x emissions from the facility. Potential NO_x emissions for each RICE were limited to less than 100 tpy to be classified as Low Mass Emitting (LME) units under the Acid Rain Program. The Department of Environmental Quality (Department) limited BCP's emissions by establishing an operational limit for each RICE of 3,850 hours during any rolling 12-month time period and by limiting the fuel combusted in each RICE. The facility-wide potential NO_x emissions were further limited by a combined RICE operation limit of 9,600 hours during any rolling 12-month period. This limit allowed the BCP facility to remain below the NSR/PSD permitting threshold of 250 tpy. On May 8, 2003, Permit #3211-01 was issued final. Permit #3211-01 replaced Permit #3211-00. The equipment permitted in Permit #3211-01 was never constructed.

On February 24, 2004, BCP submitted a complete permit application for the modification of Montana Air Quality Permit #3211-01. Specifically, the permit action would allow BCP to replace the three previously permitted RICE (48.3 MW combined capacity) with nine RICE (54.9 MW combined capacity).

Under the permit action, BCP requested federally enforceable permit conditions to limit the annual potential NO_x emissions from the facility to a level less than the NSR/PSD permitting threshold of 250 tpy per pollutant. The permit limited the combined RICE operation to 34,600 hours during any rolling 12-month time period and restricts BCP to the use of pipeline quality natural gas. Further, potential NO_x emissions from each RICE are less than 100 tpy. Therefore, the units are classified as LME under the Acid Rain Program (Title IV of the FCAA), thereby eliminating the requirement(s) for compliance with various provisions of the Acid Rain Program. The emission inventory contained in Section IV of the permit analysis demonstrates that the emissions are below the Acid Rain Program LME threshold and below the NSR/PSD permitting threshold.

BCP proposed an OxiCat (see Section III.B of the permit analysis for a discussion of controls), which controls both CO and VOC emissions. However, the uncontrolled CO emissions are greater than 100 tpy, so the Administrative Rules of Montana (ARM), Chapter 17.8, Subchapter 15, Compliance Assurance Monitoring (CAM) rules would apply for emissions of CO from each RICE. The uncontrolled VOC emissions are less than 100 tpy, so the CAM rules would not apply for the VOC emissions from the RICE. Also, because lean-burn technology is integral to the design of the proposed RICE, the Department does not consider lean-burn technology to be a control device as defined in the ARM 17.8.1501(5). Therefore, the uncontrolled NO_x emissions from the RICE are below 100 tpy and are not subject to CAM. Permit #3211-02 replaced Permit #3211-01.

The Department received a letter dated February 14, 2005, from BCP to change the corporate

name on Permit #3211-02 from BCP to Basin Creek. The permit action transferred ownership of Permit #3211-02 from BCP to Basin Creek. Permit #3211-03 replaced Permit #3211-02.

D. Current Permit Action

The Department received a letter dated November 28, 2005, from Basin Creek requesting the reference to the reciprocating internal combustion engines (RICE) be changed from LME units to exempt new units. Basin Creek submitted an acid rain monitoring plan and LME unit certification to the United States Environmental Protection Agency (EPA). Through correspondence with the USEPA, an understanding was reached that the RICE qualify for a new unit exemption. The current permit action will change the reference to the RICE to exempt new units.

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 subchapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emissions 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. Based on the emissions from the RICE, the Department determined that initial testing for NO_x and CO is necessary to demonstrate compliance with applicable emission limits. Furthermore, based on the emissions from the RICE and the current Department testing schedule guidance, the Department determined that additional testing every 2 years is necessary to demonstrate compliance with the NO_x and CO emission limits.
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).

Basin 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 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 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. (2) 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 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide
4. ARM 17.8.213 Ambient Air Quality Standard for Ozone
5. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
6. ARM 17.8.221 Ambient Air Quality Standard for Visibility
7. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀

Basin 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 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. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precaution be taken to control emissions of airborne particulate. (2) Under this rule, Basin 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 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). Basin Creek's RICE units are not considered NSPS affected facilities under 40 CFR Part 60 because the units do not meet the definition of an affected unit under any subpart contained in 40 CFR 60.
4. ARM 17.8.341 Emission Standards for Hazardous Air Pollutants. This rule incorporates, by reference, 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants (NESHAP). Since HAP emissions from the Basin Creek power generation facility are less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined, the Basin Creek facility is not subject to the provisions of 40 CFR Part 61.
5. ARM 17.8.342 Emission Standards for Hazardous Air Pollutants for Source Categories.

This rule incorporates, by reference, 40 CFR Part 63, NESHAP for Source Categories. Since HAP emissions from the Basin Creek power generation facility are less than 10 tons per year for any individual HAP and less than 25 tons per year for all HAPs combined, the Basin Creek facility is not subject to the provisions of 40 CFR Part 63.

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. 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. Basin Creek was not required to submit a fee because the current permit action is administrative.
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; and 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 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 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit modification to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year of any pollutant. Basin Creek has a PTE greater than 25 tons per year of NO_x, CO, and VOC; 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 are not subject to 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. Basin Creek was not required to submit a fee because the current permit action is administrative. (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 is an administrative amendment action;

therefore, no public notice was required.

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 described 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 Basin 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 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.

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 FCAA that it would emit, except as this subchapter would otherwise allow.

The Basin Creek facility is not a listed source and the facility's permitted potential emissions are less than 250 tons per year for any 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. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one HAP, or 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 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 #3211-04 for Basin Creek, the following conclusions were made:
 - a. The facility's PTE is greater than 100 tons/year for NO_x.
 - 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 facility is not located in a serious PM₁₀ nonattainment area. Basin Creek is not a major source for PM₁₀ and the requirements contained in ARM 17.8.901, *et seq.* do not apply to the Basin Creek facility. Further, previous modeling analysis showed that PM₁₀ impacts from the Basin Creek facility comply with the Butte/Silver Bow State Implementation Plan.
 - d. This facility is not subject to a current NSPS standard.
 - e. This facility is not subject to any current NESHAP standards.
 - f. This facility is a Title IV affected source. Basin Creek qualifies for a new unit exemption (40 CFR 72.7(b)(1)).
 - g. This facility is not an EPA designated Title V source.

Based on the above information, the Basin Creek facility is a major source, and a Title V Operating Permit is required.

III. BACT Determination

A BACT determination is required for each new or altered source. Basin Creek shall 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. A BACT analysis was not required for the current permit action because the current permit action is considered an administrative action.

IV. Emission Inventory

RICE Emission Inventory: Worst Case Controlled Emissions (tons/year)					
Source	PM/PM₁₀	NO_x	CO	VOC	SO_x
Combined RICE Emissions (9 RICE: 34,200 hrs)	18.8	246.2	87.2	44.5	0.51
Pre-Heater Emissions (9 heaters)	0.1	1.1	0.9	0.1	0.01
Furnace Heater Emissions (9 heaters)	0.1	0.9	0.7	0.05	0.00
Facility-Wide Emissions	20.0	248.2	88.8	44.6	0.5

RICE Emission Inventory

Individual RICE Operating Hours: 8,760 hr/yr
 Combined RICE Operating Hours: 34,200 hr/yr (Permit Limit)

PM/PM₁₀ Emissions:

Emission Factor: 1.1 lb/hr/RICE (Manufacturers Information)
 Individual Calculation: 1.1 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 4.8 ton/yr
 Combined Calculation: 1.1 lb/hr * 34,200 hr/yr * 0.0005 ton/lb = 18.8 ton/yr

NO_x Emissions:

Emission Factor: 14.4 lb/hr/RICE (BACT)
 Individual Calculation: 14.4 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 63.1 ton/yr
 Combined Calculation: 14.4 lb/hr * 34,200 hr/yr * 0.0005 ton/lb = 246.2 ton/yr

CO Emissions:

Emission Factor: 5.1 lb/hr/RICE (BACT)
 Individual Calculation: 5.1 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 22.3 ton/yr
 Combined Calculation: 5.1 lb/hr * 34,200 hr/yr * 0.0005 ton/lb = 87.2 ton/yr

VOC Emissions:

Emission Factor: 2.6 lb/hr/RICE (BACT)
 Individual Calculation: 2.6 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 11.4 ton/yr
 Combined Calculation: 2.6 lb/hr * 34,200 hr/yr * 0.0005 ton/lb = 44.5 ton/yr

SO_x Emissions:

Emission Factor: 0.03 lb/hr/RICE (Manufacturers Worst-Case Information)
 Individual Calculation: 0.03 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.13 ton/yr
 Combined Calculation: 0.03 lb/hr * 34,200 hr/yr * 0.0005 ton/lb = 0.51 ton/yr

Pre-Heater Emission Inventory

Maximum Fuel Combustion Rate: 2.5 MMBtu/hr-unit
 Fuel Heating Value: 1.020 MMBtu/MMscf
 Number of Units: 9

Hours of Operation (9 heaters): 9,000 hr/yr
Fuel Usage: $[2.5 \text{ MMBtu/hr-unit}]/(1,020 \text{ MMBtu/MMscf}) * 9,000 \text{ hrs/yr} = 22.0 \text{ MMscf/yr}$

PM/PM₁₀ Emissions:

Emission Factor: 7.6 lb/MMscf (FIRE 6.23)
Calculation: $7.6 \text{ lb/MMscf} * 22.0 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.08 \text{ ton/yr}$

NO_x Emissions:

Emission Factor: 100 lb/MMscf (FIRE 6.23)
Calculation: $100 \text{ lb/MMscf} * 22.0 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 1.1 \text{ ton/yr}$

CO Emissions:

Emission Factor: 84 lb/MMscf (FIRE 6.23)
Calculation: $84 \text{ lb/MMscf} * 22.0 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.92 \text{ ton/yr}$

VOC Emissions:

Emission Factor: 5.5 lb/MMscf (FIRE 6.23)
Calculation: $5.5 \text{ lb/MMscf} * 22.0 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.06 \text{ ton/yr}$

SO_x Emissions:

Emission Factor: 0.6 lb/MMscf (FIRE 6.23)
Calculation: $0.6 \text{ lb/MMscf} * 22.0 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.007 \text{ ton/yr}$

Furnace Heater Emission Inventory

Maximum Fuel Combustion Rate: 2.0 MMBtu/hr-unit
Fuel Heating Value: 1,020 MMBtu/MMscf
Number of Units: 9
Hours of Operation (9 heaters): 9,000 hr/yr
Fuel Usage: $[2.0 \text{ MMBtu/hr-unit}]/(1,020 \text{ MMBtu/MMscf}) * 9,000 \text{ hr/yr} = 17.6 \text{ MMscf/yr}$

PM/PM₁₀ Emissions:

Emission Factor: 7.6 lb/MMscf (FIRE 6.23)
Calculation: $7.6 \text{ lb/MMscf} * 17.6 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.07 \text{ ton/yr}$

NO_x Emissions:

Emission Factor: 100 lb/MMscf (FIRE 6.23)
Calculation: $100 \text{ lb/MMscf} * 17.6 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.88 \text{ ton/yr}$

CO Emissions:

Emission Factor: 84 lb/MMscf (FIRE 6.23)
Calculation: $84 \text{ lb/MMscf} * 17.6 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.74 \text{ ton/yr}$

VOC Emissions:

Emission Factor: 5.5 lb/MMscf (FIRE 6.23)
Calculation: $5.5 \text{ lb/MMscf} * 17.6 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.05 \text{ ton/yr}$

SO_x Emissions:

Emission Factor: 0.6 lb/MMscf (FIRE 6.23)
Calculation: $0.6 \text{ lb/MMscf} * 17.6 \text{ MMscf/yr} * 0.0005 \text{ ton/lb} = 0.005 \text{ ton/yr}$

V. Ambient Air Quality Impacts

The modeling submitted in support of Permit Application #3211-02 showed compliance with the ambient standards, PSD increments, and Butte/Silver Bow State Implementation Plan.

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

An environmental assessment was not required because this action is administrative.

Analysis prepared by: Trista Glazier

Date: 1/13/06