AIR QUALITY PERMIT

Issued To: Bull Mountain Coal Mining, Inc.
490 North 31st Street, #308
Billings, MT 59101

Permit: #3179-03
Application Complete: 3/4/08
Preliminary Determination Issued: 4/9/08
Department's Decision Issued: 4/25/08
Permit Final: 5/13/08
AFS: #065-0003

An air quality permit, with conditions, is hereby granted to Bull Mountain Coal Mining, Inc. (BMCM), 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

BMCM is located in the Bull Mountains approximately 16 miles southeast of Roundup, Montana, and approximately 35 miles northeast of Billings, Montana. The legal description of the site is Section 12, West ½ Section 13, and Section 14, Township 6 North, Range 26 East, in Musselshell County, Montana.

B. Current Permit Action

On December 20, 2007, the Department of Environmental Quality (Department) received a request from BMCM for a modification to Permit #3179-02. BMCM is proposing to install a new coal preparation plant with a maximum annual production of 15 million tons of coal. BMCM will remove the existing coal preparation plant and associated storage piles once the new plant is operating. In addition, BMCM is proposing to install two 35,000 British thermal unit per hour (Btu/hr) boilers to heat buildings. The units will be powered using coal, propane, or electricity. Finally, BMCM requested the name on Permit #3179-03 be changed from BMP Investments Incorporated to BMCM.

Under the proposed new coal preparation plant design, coal is dumped from the mine portal onto a conveyor which dumps onto the proposed Stockpile #1. From Stockpile #1, coal is conveyed to the screening/crushing building. From the screening/crushing building, coal is conveyed to the preparation plant stockpile (Stockpile #2). Coal from Stockpile #2 can either be conveyed to the preparation plant or the blended coal stockpile (Stockpile #3). Coal sent to the preparation plant is washed, dewatered, and the conveyed to the clean coal stockpile (Stockpile #4).

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Coal production from the facility shall be limited to 1.3 million tons during any rolling 12-month time period for the development phase of the coal mining operation (ARM 17.8.749).

2. Coal production from the facility shall be limited to 15.0 million tons during any rolling 12-month time period for the primary phase of the coal mining operation (ARM 17.8.749).

3. BMCM shall not cause or authorize any particulate stack emissions (total particulate), from pneumatic coal cleaning equipment, which exceed the following (ARM 17.8.340 and 40 CFR 60, Subpart Y):

   a. 0.040 grams per dry standard cubic meter (0.018 grains per dry standard cubic foot); and

   b. 10% opacity or greater averaged over 6 consecutive minutes.

4. BMCM shall not cause or authorize to be discharged into the outdoor atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, any emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart Y).

5. BMCM shall not cause or authorize to be discharged into the atmosphere, from any other source of process or fugitive particulate emissions, any visible emissions that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes (ARM 17.8.304, ARM 17.8.308, and ARM 17.8.752).

6. Water and/or chemical dust suppressant shall be available on site and used, as necessary, to maintain compliance with the opacity limitations in Section II.A.4 and Section II.A.5 (ARM 17.8.752).

7. BMCM shall use a fabric filter baghouse to control process particulate emissions from surface crushing and screening operations (ARM 17.8.752).

8. BMCM shall use a fabric filter baghouse to control process particulate emissions from coal drying and cleaning operations (ARM 17.8.752).

9. BMCM may operate one run-of-mine (ROM) coal stockpile not to exceed a surface area of 11.9 acres (520,000 ft^2) (ARM 17.8.749).

10. BMCM may operate four coal stockpiles, Stockpiles #1, #2, #3, and #4, each not to exceed a surface area of 4.6 acres (200,000 ft^2) (ARM 17.8.749).

11. BMCM shall use watering and/or chemical dust suppressants and contouring techniques to control particulate emissions from the coal stockpiles (ARM 17.8.752).

12. Fall distance shall be minimized during the transfer of waste material and coal to storage piles and during all transfer of material to haul trucks, material traps, hoppers, bins, and conveyors (ARM 17.8.752).

13. BMCM may operate one topsoil storage pile not to exceed a surface area of 2.3 acres (100,000 ft^2) (ARM 17.8.749).

14. BMCM shall employ watering and/or chemical dust suppressant, contouring, compaction techniques, and re-vegetation to reduce emissions from the topsoil storage pile (ARM 17.8.752).

15. BMCM shall employ watering and/or chemical dust suppressant, contouring, compaction techniques, and eventual covering with soil and re-vegetation to reduce emissions from waste disposal activities (ARM 17.8.752).

16. BMCM shall enclose all coal and waste material conveyors. Conveyors shall be enclosed on the top and sides with a partial opening on the bottom (ARM 17.8.752).

17. BMCM shall use flexible chutes, enclosures, and fabric filtration to control emissions from all coal and waste material conveying transfer points and coal loadout operations (ARM 17.8.752).

18. BMCM shall convey coal from Stockpiles #3 and #4 to either the product loadout conveyor directly or to product silos only (ARM 17.8.752).

19. BMCM shall operate all crushers and screens within an enclosed building (ARM 17.8.752).

20. BMCM shall not operate more than two crushers at any given time and the maximum rated design capacity of each crusher shall not exceed 3,500 tons per hour (TPH) (ARM 17.8.749).

21. Crushing production is limited to 15 million tons during any rolling 12-month time period (ARM 17.8.749).

22. BMCM shall not operate more than two screens at any given time and the maximum rated design capacity of each screen shall not exceed 3,500 TPH (ARM 17.8.749).

23. Screening production is limited to 15 million tons during any rolling 12-month time period (ARM 17.8.749).

24. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

25. All visible emissions from any other NSPS-affected equipment, such as screens or conveyor transfers, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

26. BMCM shall utilize a stacker-reclaim (underground) system for movement of product into and out of stockpiles during the primary phase of operations (ARM 17.8.752).

27. Rejects/waste material for the primary phase shall be enclosed in a bin equipped with a hopper for haul truck loading (ARM 17.8.752).

28. BMCM shall incorporate a radial stacker with an adjustable chute at the discharge end for both the clean coal and reject stockpiles during the development phase (ARM 17.8.752).

29. BMCM shall incorporate a fixed stacker for both the ROM and clean coal stockpiles during the primary phase of the project (ARM 17.8.752).

30. BMCM shall develop, implement, and maintain good housekeeping practices to keep coal and waste material transfer locations clean (ARM 17.8.752).

31. BMCM shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).

32. BMCM shall clean up all spilled material from road surfaces (ARM 17.8.752).

33. BMCM shall treat all unpaved portions of the haul roads, access roads, parking lots, or general plant area with water and/or chemical dust suppressant, as necessary, to maintain compliance with the reasonable precautions limitation in Section II.A.22 (ARM 17.8.749).

34. BMCM shall not operate more than two boilers at any given time and each boiler shall not exceed a maximum design capacity of 35,000 Btu/hr each (ARM 17.8.749).

35. BMCM may power the 35,000 Btu/hr boilers using propane or coal (ARM 17.8.749).

36. Total coal combustion in 35,000 Btu/hr boilers shall be limited to 26 tons during any rolling 12-month time period (ARM 17.8.749).

37. BMCM shall comply with all applicable standards and limitations, and the reporting, recordkeeping, and notification requirements contained in 40 CFR 60, Subpart Y, Standards of Performance for Coal Preparation Plants (ARM 17.8.340 and 40 CFR 60, Subpart Y).

B. Testing Requirements

1. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the development phase of the operation, the recipient shall conduct a Method 5 performance source test(s) on the coal wash plant baghouse stack to verify compliance with Section II.A.3.a (ARM 17.8.340 and 40 CFR 60, Subpart Y).

2. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the development phase of the operation, the recipient shall conduct a Method 9 performance source test(s) on the coal wash plant baghouse stack and all other affected equipment to verify compliance with Section II.A.3.b and Section II.A.4 (ARM 17.8.340 and 40 CFR 60, Subpart Y).

3. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the primary phase of the operation, the recipient shall conduct a Method 5 performance source test(s) on the coal wash plant baghouse stack to verify compliance with Section II.A.3.a. After the initial source test(s), additional testing shall occur on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart Y).

4. Within 60 days after achieving the maximum production rate, but not later than 180 days after initial start-up of the primary phase of the operation, the recipient shall conduct a Method 9 performance source test(s) on the coal wash plant baghouse stack and all other affected equipment to verify compliance with Section II.A.3.b and Section II.A.4. After the initial source test(s), additional testing shall occur on an every 5-year basis or according to another testing/monitoring schedule as may be approved by the Department (ARM 17.8.105, ARM 17.8.340, ARM 17.8.749, and 40 CFR 60, Subpart Y).

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

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

C. Operational Reporting Requirements

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

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

2. BMCM shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745(l), 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(l)(d) (ARM 17.8.745).

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

4. BMCM shall document, by month, the development phase coal production from the mine. By the 25th day of each month, BMCM shall total the development phase coal production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.1. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

5. BMCM shall document, by month, the primary phase coal production from the mine. By the 25th day of each month, BMCM shall total the primary phase coal production for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.2. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

6. BMCM shall document, by month, the crushing production from the facility. By the 25th day of each month, BMCM shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.21. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

7. BMCM shall document, by month, the screening production from the facility. By the 25th day of each month, BMCM shall calculate the screening production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.23. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

8. BMCM shall document, by month, the coal combustion in the 35,000 Btu/hr boilers. By the 25th day of each month, BMCM shall total the coal combusted for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.25. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).

D. Ambient Monitoring Requirements

Modeled impacts predicted the BMCM project would consume 94% (141 micrograms per cubic meter ($\mu g/m^3$)) of the 24-hour ambient standard (150$\mu g/m^3$) and 87% (43.5 μg/m3) of the annual standard (50 $\mu g/m^3$). Based on this information and using the Department Ambient Monitoring Requirements Guidance Statement (10/09/98), the Department, assuming a medium level of confidence, will require ambient monitoring for the mine operations as proposed by BMCM when the mine reaches a coal production level of 1.3 million tons during any rolling 12-month period.

BMCM shall operate an ambient air quality monitoring network around the project area. The monitoring requirements are more fully described in the Monitoring Plan (Attachment 1). Exact monitoring locations must be approved by the Department prior to installation or relocation (ARM 17.8.749).

E. Notification

BMCM shall provide the Department with written notification of the following dates within the specified time periods (ARM 17.8.749):

1. Once the coal production for the development phase of the coal mining operation reaches 1.3 million tons during any rolling 12-month time period within 15 days after coal production reaches 1.3 million tons during any rolling 12-month time period;

2. Commencement of construction of the primary phase of the coal mine within 30 days after commencement of construction; and

3. Actual start-up date of the primary phase of the coal mine within 15 days after the actual start-up of the coal mine in the primary phase.

SECTION III: General Conditions

A. Inspection – BMCM 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 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 BMCM fails to appeal as indicated below.

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

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

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

F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy 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 BMCM may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.

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

Attachment 1

AMBIENT AIR MONITORING PLAN
Bull Mountain Coal Mining, Inc.
Permit #3179-03

1. This ambient air monitoring plan is required by air quality Permit #3179-03, which applies to Bull Mountain Coal Mining, Inc. (BMCM), coal mining operation south of Roundup, Montana. This monitoring plan may be modified by the Department of Environmental Quality (Department). All requirements of this plan are considered conditions of the permit.

2. BMCM shall install, operate and maintain three air monitoring sites in the vicinity of the mine and facilities as described in Item 3 below. The exact locations of the monitoring sites must be approved by the Department and meet all the siting requirements contained in the Montana Quality Assurance Manual including revisions, the EPA Quality Assurance Manual including revisions, and Parts 53 and 58 of the Code of Federal Regulations (CFR), or any other requirements specified by the Department.

3. BMCM may request that the Department review the ambient monitoring requirement if changes or commitments are made to reduce emissions from the facility. Any changes or commitments must be approved by the Department. The air monitoring data will be reviewed by the Department to determine if continued monitoring or additional monitoring is warranted.

4. BMCM shall monitor the following parameters at the sites and frequencies described below:

AIRS # & Site Name	UTM Coordinates	Parameter	Frequency
30-065-XXXX		PM-10[1] 81102 and 85101 Wind Speed, Direction and Sigma Theta 61101,61102 and 61106	Every third day Continuous
Plant Area (Downwind) 30-065-XXXX		PM-10 (Collocated[2]) 81102 and 85101	Every sixth day
Plant Area (Upwind) 30-065-XXXX		PM-10	Every third day

[1]PM-10 = particulate matter less than 10 microns.
[2]The requirement for a collocated PM-10 sampler may be waived if the monitor operator operates a collocated PM-10 sampler at another site.

5. Data recovery for all parameters shall be at least 80 percent computed on a quarterly and annual basis. The Department may require continued monitoring if this condition is not met.

6. Any ambient air monitoring changes proposed by BMCM must be approved in writing by the Department.

7. BMCM shall utilize air monitoring and quality assurance procedures, which are equal to or exceed the requirements described in the Montana Quality Assurance Manual including revisions, the EPA Quality Assurance Manual including revisions, 40 CFR Parts 53 and 58, and any other requirements specified by the Department.

8. BMCM shall submit quarterly data reports within 45 days after the end of the calendar quarter and an annual data report within 90 days after the end of the calendar year. The annual report may be substituted for the fourth quarterly report if all information in 9 below is included in the report.

9. The quarterly report shall consist of a narrative data summary and a data submittal of all data points in AIRS format. This data shall be submitted on a 3 ½" diskette. The narrative data summary shall include:

    a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations (identified by AIRS number) in relation to the mine and facilities and the general area

    b. A hard copy of the individual data points

    c. The quarterly and monthly means, per site, for particulate matter with an aerodynamic parameter of 10 microns or less (PM_{10})

    d. The first and second highest 24-hour concentrations for PM_{10}

    e. A summary of the data collection efficiency

    f. A summary of the reasons for missing data

    g. Precision and accuracy (audit) data

    h. A summary of any ambient standard exceedances

    i. Calibration information

10. The annual data report shall consist of a narrative data summary containing:

    a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site locations (identified by AIRS number) in relation to the mine and facilities and the general area

    b. A pollution trend analysis

    c. The annual means, per site, for PM_{10}

    d. The first and second highest 24-hour concentrations, per site, for PM_{10}

    e. An annual summary of data collection efficiency

    f. An annual summary of precision and accuracy (audit) data

    g. An annual summary of any ambient standard exceedances

    h. Recommendations for future monitoring

11. The Department may audit, or may require BMCM to contract with an independent firm to audit, the air monitoring network, the laboratory performing associated analyses, and any data handling procedures at unspecified times. On the basis of the audits and subsequent reports, the Department may recommend or require changes in the air monitoring network and associated activities in order to improve precision, accuracy and data completeness.

Permit Analysis
Bull Mountain Coal Mining, Inc.
Permit #3179-03

I. Introduction/Process Description

A. Permitted Equipment

Bull Mountain Coal Mining, Inc. (BMCM) operates an underground coal mining operation in the Bull Mountains near Roundup, Montana and approximately 35 miles north of Billings, Montana. The facility contains: reject piles; clean coal piles; an old coal preparation plant; a new coal preparation plant; a rail loadout; a waste disposal area (WDA); mine ventilation; mine yard area equipment; a quarry; a run-of-mine (ROM) coal stockpile; a topsoil storage pile; coal Stockpiles #1, #2, #3, and #4; two small building heating boilers (35,000 British thermal units per hour (Btu/hr)); and, various conveyors and transfer stations.

B. Source Description

BMCM operates an underground coal mine that is initially capable of producing up to 1.3 million tons of raw coal per year. The initial phase of this project covers the development stage of the operation. The initial development phase allows for some production while the ultimate primary facilities are constructed. The primary facilities (new coal wash plant and on-site rail loadout) will support a production rate of up to 15 million tons of raw coal per year.

The operations at the facility can be classified into four categories: underground mining, coal handling and storage, coal cleaning, and waste disposal. Coal will be mined underground using continuous miner sections and longwall panels. The continuous miner will be used to establish a mineable block of coal, and the longwall equipment will be used to extract the block of coal. A conveyor belt will be used to transfer the ROM coal to a stockpile outside of the mine portal.

Surface material storage facilities will include stockpiles of ROM coal, clean coal, and reject material from the wash plant. Material will be moved from inside the mine to the ROM stockpile on a high capacity belt conveyor. Other conveyors will be used to transport coal from the ROM pile to the coal cleaning facility and from there to the clean coal piles. Coal will be supplied to local consumers from bins with hoppers located at the wash plant facilities. Reject material will be sent to the WDA.

During the development operations, the coal will be transferred from the ROM stockpile to the existing wash plant via a belt conveyor. The coal will pass through the buffer bin to a crusher and sizing screen and then on to the heavy media washer. The final product will be passed through a fluidized bed to air dry the product. A primary coal washing facility will be constructed concurrently with the development operations.

The development phase wash plant will reject 19 percent of the raw coal stream and the new primary facility will reject 13 percent of the raw coal stream. These coal processing wastes and other mine development wastes will be permanently disposed of in the WDA located 1.4 miles northeast of the wash plant. The mine plan calls for revegetation of this area after completion of the project and after the appropriate seed bed preparation.

During the primary phase of operations, coal will be dumped from the mine portal onto a conveyor which dumps onto the proposed Stockpile #1. From Stockpile #1 the coal will be conveyed to the preparation plant stockpile (Stockpile #2). Coal from Stockpile #2 will either be conveyed to the preparation plant or the blended coal stockpile (Stockpile #3).

Coal sent to the preparation plant is washed, dewatered, and then conveyed to the clean coal stockpile (Stockpile #4). No dyer is used in the proposed preparation plant. Waste and reject material is conveyed to the refuse bin loadout where it is initially trucked via haul road and will ultimately be transferred via conveyor belt to the WDA at the northeast section of the plant boundary. A loader will be used at the WDA to move material into desired locations.

Coal form Stockpiles #3 and #4 will be conveyed to either the product loadout conveyor or directly to product silos. The product loadout conveyor feeds the batch weigh loadout hopper which loads railcars for delivery.

C. Permit History

Permit #3179-00 was issued to BMP Investments Incorporated (BMP) on May 10, 2002, for the project as described above located in Sections 12, 13, and 14, Township 6 North, Range 26 East, in Musselshell County, Montana.

On May 9, 2003, BMP submitted a request to delay the commencement of ambient air monitoring until the mine reaches a coal production level of 1.3 million tons during any rolling 12-month period. The permit action was an administrative amendment to make that change and to update the rule citations in the permit. **Permit #3179-01** replaced Permit #3179-00.

On November 21, 2006, the Department of Environmental Quality (Department) received a request from BMP for a modification to Permit #3179-01 to add, during the development phase of the mining operation, a ROM coal stockpile, a topsoil stockpile, additional haul roads, and associated transfers involved with the coal stockpile and topsoil stockpile. The request allowed BMP to transfer coal from the mine portal to a ROM coal stockpile using haul trucks, a wheeled loader, and a bulldozer. Coal is dumped to the ground from the mine portal. A wheeled loader loads the haul trucks for transport to the ROM coal stockpile. The haul trucks dump the coal to the ground and a bulldozer moves the coal to the desired location within the pile. Prior to stockpiling the coal, a bulldozer prepares the coal stockpile site by removing the topsoil (about 12 inches of soil depth) and moves the soil into a pile for storage.

BMP proposed the following equipment and emission sources as listed below:

- ROM coal stockpile (surface area: 520,000 square feet, (ft^2))
- ROM coal stockpile site preparation (topsoil removal – dozer)
- Topsoil storage pile (surface area: 100,000 ft^2)
- Mobile sources (haul trucks, wheeled loader, and bulldozer)

BMP will add to the ROM coal stockpile until the primary phase of the mining operation begins. After the primary phase of the mining operation has begun, BMP will transfer the coal from the coal stockpile to the new coal preparation plant. BMP did not request an increase in the production rate of the development phase. Once the primary phase has begun, the haul trucks, wheeled loader, and the requested haul road operations will not be needed. **Permit #3179-02** replaced Permit #3179-01.

D. Current Permit Action

On December 20, 2007, the Department received a request from BMCM for a modification to Permit #3179-02. BMCM is proposing to install a new coal preparation plant with a maximum annual production of 15 million tons of coal. BMCM will remove the existing coal preparation plant and associated storage piles once the new plant is operating. In addition, BMCM is proposing to install two 35,000 Btu/hr boilers to heat buildings. The units will be powered using coal, propane, or electricity. Finally, BMCM requested the name on Permit #3179-02 be changed from BMP to BMCM. **Permit #3179-03** replaces Permit #3179-02.

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 Administrative Rules of Montana (ARM) and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.

2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices), and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

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

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

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

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

1. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter
2. ARM 17.8.221 Ambient Air Quality Standard for Visibility
3. ARM 17.8.223 Ambient Air Quality Standard for PM_{10}

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

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

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

2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne Particulate Matter (PM). (2) Under this rule, BMCM 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. This rule requires that no person shall burn liquid, solid or gaseous fuel in excess of the amount set forth in this rule.

6. ARM 17.8.340 Standard of Performance for New Stationary Sources and Emission Guidelines for Existing Sources. This rule incorporates, by reference, 40 CFR Part 60, Standards of Performance for New Stationary Sources (NSPS). BMCM is considered an NSPS affected facility under 40 CFR 60 and is subject to the requirements of 40 CFR 60, Subpart Y, Standard of Performance for Coal Preparation Plants.

   40 CFR Part 60, Subpart Y - Coal Preparation Plants - requires a particulate emission limitation of 0.04 grams per dry standard cubic meter, a 10 percent opacity limitation on pneumatic coal cleaning emissions, and an opacity limitation of 20 percent for coal processing, conveying, storage, and loading systems as described in Section II of the permit. The subpart also requires particulate and opacity limitations for thermal dryers. The coal dryer proposed for the development phase of the operation uses ambient air as opposed to a heated gas stream; therefore, that portion of the regulation is not applicable. If at some point, the permittee proposes to use a heated gas stream for coal drying, the Department must be notified in order to determine the monitoring and testing requirements with respect to NSPS applicability. The NSPS applicability for pneumatic coal cleaning and thermal dryers is specific to bituminous coal, while the other provisions apply to all classifications of coal. The applicant reported that the coal to be mined is classified as bituminous.

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 section 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. BMCM submitted the appropriate permit application fee for the current permit action.

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.

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 facility to obtain an air quality permit or permit alteration if they construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 25 tons per year (TPY) of any pollutant. BMCM has the PTE more than 25 TPY of particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}); 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, modification, or use of a source. BMCM submitted the required permit application for the current permit action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. BMCM submitted an affidavit of publication of public notice for the December 19, 2007, issues of *The RoundupRecord-Tribune* and the *Winnett Times*, newspapers of general circulation in the city of Roundup in Musselshell County, as proof of compliance with the public notice requirements.

6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.

7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and economically feasible, except that BACT shall be utilized. A BACT review was required for the current permit action. 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 BMCM 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 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 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 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).

As part of previous permit application processes, the Department required BMCM to provide information regarding the ownership relationship between the Bull Mountain Mine #1 Project and the proposed Roundup Power Project.

BMCM indicated that BMCM is the lessee under a coal lease comprising the coal to be mined at the Bull Mountain Mine #1 coal mine. In addition, BMCM has applied for the permit to mine the coal at the mine.

BMCM further indicated that the Roundup Power Project will ultimately be owned by private, municipal, and cooperative utilities, and possibly industrial companies. None of these equity owners of the Roundup Power Project have any interest or ownership in BMCM nor will they in the future. Currently Bull Mountain Development Company, No. 1, L.L.C., is engaged in the development of the Roundup Power Project. While Bull Mountain Development Company, No. 1, L.L.C., is currently involved in the development of the Roundup Power Project, it intends to transfer all rights it has in the project to the ultimate owners of the Roundup Power Project once those owners have been selected and have entered into appropriate contracts among themselves. BMCM currently has no interest or ownership in the Roundup Power Project and it is not anticipated that BMCM will, at any time, have any ownership interests or right to control the ultimate entity that will complete development of the Roundup Power Project and thereafter operate such project.

BMCM does have a contractual agreement with Bull Mountain Development Company, No. 1, L.L.C., to supply coal and for ultimate ash disposal for the Roundup plant. This contract will be transferred from Bull Mountain Development Company, No. 1, L.L.C., to the plant owners upon completion of the owner's agreements.

Therefore, for the purpose of air permitting, the Department currently considers the Bull Mountain Mine #1 and the Roundup Power Project to be separate and distinct stationary sources as defined under New Source Review.

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 source having:

   a. PTE > 100 tons/year of any pollutant;

   b. PTE > 10 tons/year of any one Hazardous Air Pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or

   c. PTE > 70 tons/year of PM_{10} in a serious PM_{10} nonattainment area.

2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing Air Quality Permit #3179-03 for BMCM, the following conclusions were made:

   a. The facility's PTE is less than 100 tons/year for any pollutant (excluding fugitive emissions).

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

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

   d. This facility is subject to 40 CFR 60, Subpart Y.

   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 BMCM will be a minor source of emissions as defined under Title V and BMCM is not required to obtain a Title V Operating Permit. However, if minor sources subject to NSPS are required to obtain a Title V Operating Permit in the future, BMCM will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or altered source. BMCM 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 modifies Permit #3179-02 by allowing the installation of a new coal preparation plant with a maximum annual production of 15 million tons of coal as well as two 35,000 Btu/hr boilers to heat buildings; therefore, a BACT analysis was required for the current permit action.

In summary, the Department determined that BACT for the coal Stockpiles #1, #2, #3, and #4; transfer points; coal handling; topsoil handling; and vehicle traffic on unpaved roads is the continuation of emission control techniques currently used at the mine. This includes chemical stabilization and watering on haul roads and good engineering practices such as minimizing fall distances on material handling operations as necessary to maintain compliance with the opacity and reasonable precautions limitations. The Department also determined BACT for the heating boilers to be proper operation and maintenance. More information regarding these determinations is listed below.

The following pollutants will be emitted as a result of the project:

Pollutant	Source
Particulates (PM/PM_{10}):	Fugitive emissions from mining activities, conveying, handling, and loadout of coal; handling, conveying, and disposal of reject/waste material; handling of topsoil and topsoil storage pile; travel on unpaved roads; and emissions from coal combustion.
Nitrogen Oxides (NO_X):	Emissions from propane and coal combustion.
Carbon Monoxide (CO):	Emissions from propane and coal combustion.
Sulfur Dioxide (SO_2):	Emissions from propane and coal combustion.

PM/PM_{10} BACT Analysis

Units with applicable emissions for this BACT analysis include fugitive emissions of particulates from coal Stockpiles #1, #2, #3, and #4 a topsoil storage pile, transfer points, coal handling, topsoil handling, and vehicle traffic on unpaved roads.

Fugitive PM/PM_{10} Emissions

In general, fugitive emissions from open sources are controlled by preventative and/or mitigating measures/techniques. The sources of fugitive particulates may be classified according to the activities, which generate the emissions. The activity classes for the proposed project include: 1) wind erosion of coal stockpiles and waste rock/soil storage; 2) coal handling and transfer; and, 3) travel on unpaved roads.

Wind erosion affects both the storage piles and outdoor material handling/disposal activities. Preventative techniques reduce emissions by reducing the extent of the source, by modifying the process, or by adjusting work practices. Reduction of emissions of fugitive dust or particulate matter from wind erosion and material handling can be accomplished by enclosure, chemical stabilization, or material wetting. Chemical stabilization will not be considered because it has been deemed technically unfeasible for the proposed project due to the constant activity on the storage piles and because the chemicals used could become air pollutants as the coal is burned.

Coal Stockpiles

A significant concern with this operation is the potential for wind erosion from the coal stockpiles. Enclosure of the stockpiles is technically infeasible due to the proposed size of each proposed pile (<250,000+ ft^2). Material wetting is proposed as BACT. The coal being transferred to the storage pile comes out of the mine at 15+% moisture initially further controlling fugitive emissions. BMCM will observe dust coming from the pile and take precautions as necessary when emissions are visible.

The Department determined that the use of reasonable precautions, contouring, and watering, as necessary, to maintain compliance with the 20% opacity limitation will constitute BACT for the coal stockpiles.

Waste rock/soil storage

The most effective control method would be to enclose the stockpiles. However, enclosure of the stockpiles is technically infeasible due to the proposed size of the storage area (1,000,000+ ft^2). The proposed BACT is a combination of seeding the topsoil pile with native grasses and using material wetting until vegetation has occurred.

The Department determined that the use of reasonable precautions, contouring, watering, as necessary to maintain compliance with the 20% opacity limitation, and seeding with native grasses will constitute BACT for the storage area.

Coal Handling and Transfer

Coal handling activities include drops from the mine portal, onto storage piles, coal loading into railcars, and movement of coal by dozers and loaders. Control methods for material transfers include minimizing fall distances, material wetting, and good housekeeping practices.

The Department determined that BMCM shall minimize the fall distance associated with all material handling activities to the greatest extent that is practically feasible. Further, BMCM shall develop, implement, and maintain good housekeeping practices.

Travel on Unpaved Roads

Control of fugitive dust from unpaved road can be reduced by paving the road surface or using chemical dust suppressants and/or watering. The cost of paving makes it economically infeasible. Proposed BACT is chemical dust suppressants and/or watering as needed.

The Department determined that the use water spray and/or chemical dust suppressant, as necessary, to maintain compliance with the opacity and reasonable precautions limitations will constitute BACT for the haul roads.

In summary, the Department determined that good housekeeping practices, minimization of fall distance for material transfer operations, the application of moisture throughout the mining process, and water spray and/or chemical dust suppressant, as necessary, to maintain compliance with permitted opacity requirements and reasonable precautions limitations constitutes BACT for these sources.

NO_X BACT Analysis

Nitrogen oxides are generated by propane and coal combustion for the heating of site facilities. As proposed, the heating of facilities will result in negligible emissions of NO_X; therefore, the Department determined that the addition of any controls would be economically unfeasible. The boiler used for these purposes may combust a maximum of 13 TPY of coal, but also may use electricity or propane to power the boilers. The Department determined that proper operation and maintenance of on site sources of NO_X will constitute BACT for the boilers.

CO BACT Analysis

Carbon Monoxide is generated by coal combustion for the heating of site facilities. As proposed, the heating of facilities will result in negligible emissions of CO; therefore, the Department determined that the addition of any controls would be economically unfeasible. The boiler used for these purposes may combust a maximum of 13 TPY of coal each, but also may use electricity or propane to power the boilers. The Department determined that proper operation and maintenance of on site sources of CO will constitute BACT for the boilers.

SO_2 BACT Analysis

Sulfur dioxide is generated by coal combustion for the heating of site facilities. As proposed, the heating of facilities will result in negligible emissions of SO_2; therefore, addition of any controls would be economically unfeasible. The boiler used for these purposes may combust a maximum of 13 TPY of coal, but also may use electricity or propane to power the boilers. The Department determined that proper operation and maintenance of on site sources of SO_2 will constitute BACT for the boilers.

IV. Emission Inventory

The annual potential emission rates were based on the maximum production of 15 million tons of coal. In the original application for Permit #3179-03, each emitting source was calculated separately; however, there were instances where multiple sources were located at the same coordinates. In response to the Department's comments to this fact, some emissions were combined into a single source for modeling purposes. The following table reflects those combined emission totals.

In addition, the method for estimating emissions from Stockpiles #1, #2, #3, and #4 were recalculated using windspeed information and calculations from AP-42 Section 13.2.5.

Activities	Control Method	PM_{10} Emissions (TPY)
Conveyors and Batch Dumps		
72" Discharge Belt (- 6") ROM to ROM Surge Stockpile Conveyor	Minimum Fall	0.71
72" Belt (- 6") ROM from Discharge Belt to Stockpile #1	Minimum Fall	0.71
60" Belt (-6") ROM from Stockpile #1 to Screen/Crush Building	Minimum Fall	0.71
Miscellaneous Stockpile Belts and 2 Cat D10 Dozers (Stockpiles) and 2 Cat 980 Loader (Stockpiles)	Minimum Fall/Watering	10.62
48" Belt (-2") Raw from Plant Feed Stockpile #2 to Prep Plant	Minimum Fall	0.71
60" Belt (-2") Coal from Clean Coal Stockpile #4 to Product Silos/Product Loadout Conveyor and Product Silos to 72" Batch Weigh Loadout Belt	Minimum Fall/Boot	1.42
36" Belt (-2") Refuse from Prep Plant to 300 ton Refuse Bin and Refuse Bin to Truck	Minimum Fall/Boot	0.22
72" Belt (-2") Coal from Product Silos/Prod. Loadout Conveyor to Batch Weigh Loadout and Batch Product Loadout to Railcars	Minimum Fall/Boot	1.42
Screening Crushing Operation		
Enclosed Crushers and Screens	Enclosure	1.92
Unpaved Roads		
2 Haul Trucks/ Haul Roads	Watering	7.92
1 Cat 980 Loader (Waste Pit)	Watering	1.66
Stockpiles		
Stockpile #1	Watering as Necessary	0.25
Stockpile #2	Watering as Necessary	0.25
Stockpile #3	Watering as Necessary	0.25
Stockpile #4	Watering as Necessary	0.25
Stockpile A - Raw Coal Pile	Watering as Necessary	0.0025
Stockpile 1A - Temporary Raw Coal Pile	Watering as Necessary	0.65
Stockpile B	Watering as Necessary	0.0031
Stockpile C	Watering as Necessary	0.0125
Stockpile D - Rock Waste Storage	Watering as Necessary	0.0059
Stockpile E	Watering as Necessary	0.0125
Stockpile F	Watering as Necessary	0.0632
Coarse Refuse Stockpile	Watering as Necessary	0.0047
Topsoil/Subsoil Stockpile	Seeding	0.0025
Topsoil/Subsoil Stockpile (Temporary)	Seeding	0.0089
Waste Rock Refuse Pile	Seeding	0.1120

Coal Fired Building Boilers		
Boiler 1	---	0.04
Boiler 2	---	0.04
Facility Total		**29.9**

V. Existing Air Quality

Baseline air quality (particulate) was monitored in the project area. The measurements included both TSP (total suspended particulate) and PM_{10}.

The period of record submitted with the application is from March 1989 through March 1992. All values are well below applicable ambient air quality standards. The following table summarizes the data (values are reported in micrograms per cubic meter ($\mu g/m^3$).

Year	Parameter	24-Hour High Reading	24-Hour Second Highest	Annual Average	No. of Samples
1989	TSP PM-10	39 53*	33 19	14 9	51 51
1990	TSP PM-10	59 29	58 27	13 9	59 57
1991	TSP PM-10	42 24	39 21	14 9	56 57
*This high PM-10 value was recorded on June 27; no TSP value was recorded on that date.					

The state and federal PM_{10} standards are as follows:

Annual Average = 50 $\mu g/m^3$
24-hour = 150 $\mu g/m^3$

Meteorological data was collected at the site as well. The predominant wind direction is from the northwest. In the immediate plant area the predominant wind is up the P.M. draw. There is also a significant southeasterly component down the draw.

Current local sources of air pollution in the area include vehicle traffic (unpaved roads), the PM Mine, agricultural activities, and home heating. Operational air monitoring requirements for the project are contained in Attachment 1.

VI. Ambient Air Impact Analysis

Aspen Consulting and Engineering, Inc. (Aspen) submitted modeling on behalf of BMCM. The airborne PM_{10} concentrations were modeled to demonstrate compliance with the Montana and National Ambient Air Quality Standards (MAAQS and NAAQS, respectively). The U.S. Environmental Protection Agency AERMOD model was used for the modeling demonstration with five years (1986 - 1990) of meteorological (met) data. The surface and upper air data were collected at the Billings and Great Falls International Airports, Montana, respectively.

The Department provided the surface characteristics for the Billings International Airport to Aspen for inclusion into AERMET, the met processor.

AERMAP, the terrain processor, was used to calculate the receptor, source, and hill heights. The receptor grid elevations were derived from digital elevation model (DEM) files from the United States Geological Survey (USGS) 7.5-minute series (1:24,000 scale) digitized topographical maps. The following thirty DEMs were used in the modeling analysis: Big Wall East, Big Wall West, Broadview East, Broadview NE, Bundy, Chimney Butte, Cherry Spring, Cotton Creek, Delphia, Dunn Mountain North, Dunn Mountain South, Elso, Gage, Gage NE, Harper Coulee, Hay Basin NE, Hay Basin North, Hay Basin South, Horsethief Creek, Lake Mason, Lake Mason SE, North Fork Crooked Creek East, North Fork Crooked Creek West, P K Ranch, P K Ranch SW, Park Coulee, Roundup, Signal Mountain, Timber Buttes North, and Timber Buttes South. A total of 4,735 receptors were used in the modeling.

Receptors were placed at 100 meter (m) spacing along the fenceline. A Cartesian grid was developed outside the fenceline. Receptors were placed at 100-m spacing for a distance of 1 kilometer (km) from the fenceline. Receptors were placed at 250-m spacing for a distance of 1 km to 3 km from the fenceline. Receptors were placed at 500-m spacing for a distance of 3 km to 10 km from the fenceline. All receptors were Universal Transverse Mercator (UTM) coordinates, North American Datum 1927 (NAD27).

Aspen did not include two building heat boilers in the modeling. The total corresponding PM_{10} emissions were approximately 0.27% of the total facility emissions. No building downwash was considered since there were no point sources in the modeling analysis.

Two types of sources were modeled, area and volume, with two different PM_{10} emission rates, 24-hour and annual. The 24-hour emission rates were based on the material transferred in pounds per hour (lb/hr) as specified in Table 2-1, Montana Air Quality Preconstruction Permit Modification Application, Permit #3179-03. The annual emission rates were based on the maximum production of 15 million tons of coal.

Table 1 shows the air dispersion modeling results for the high second high 24-hour modeled PM_{10} concentrations for each met year. Also included is the Montana default 24-hour PM_{10} background concentration of 30 $\mu g/m^3$. When added together, the concentrations were compared to both the 24-hour PM_{10} NAAQS and MAAQS, respectively.

Table 1. 24-Hour PM_{10} Ambient Air Concentration Dispersion Results.

Met Year	H2H[1] 24-Hour PM_{10} Modeled Ambient Conc. ($\mu g/m^3$)[2]	24-Hour PM_{10} Back-ground Conc. ($\mu g/m^3$)	24-Hour PM_{10} Total ($\mu g/m^3$)	24-Hour NAAQS/MAAQS[3] ($\mu g/m^3$)	Percent of NAAQS/ MAAQS (%)	H2H Receptor Location UTM (NAD27)[4]		
						Easting (mE)[5]	Northing (mN)[6]	Elevation (m)[7]
1986	24.39	30	54.39	150	36.3	697830	5126140	1203.0
1987	23.47	30	53.47	150	35.7	699013	5126294	1192.4
1988	20.41	30	50.41	150	33.6	698401	5127911	1185.1
1989	26.59	30	56.59	150	37.7	697930	5126140	1208.6
1990	22.97	30	52.97	150	35.3	698449	5127913	1184.1

1. H2H = High Second High.
2. $\mu g/m^3$ = micrograms per cubic meter.
3. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.
4. UTM = Universal Transverse Mercator; NAD27 = North American Datum 1927.
5. mE = meters Easting.
6. mN = meters Northing.
7. m = meter(s).

The 24-hour PM_{10} concentrations ranged from about 50.4 to 56.6 µg/m^3 with an average concentration of 53.6 µg/m^3, significantly below either the NAAQS/MAAQS of 150 µg/ m^3. Table 2 lists the annual PM_{10} model results for each met year with the Montana default annual PM_{10} background concentration of 8 µg/m^3. After adding the background concentration to the model results, these values were compared to the annual PM_{10} NAAQS/MAAQS.

Table 2. Annual PM_{10} Ambient Air Concentration Dispersion Results.

Met Year	H1H[1] Annual PM_{10} Modeled Ambient Conc. (µg/m^3)[2]	Annual PM_{10} Back-ground Conc. (µg/m^3)	Annual PM_{10} Total (µg/m^3)	Annual PM_{10} NAAQS/MAAQS[3] (µg/m^3)	Percent of NAAQS/ MAAQS (%)	H1H Receptor Location UTM (NAD27)[4]		
						Easting (mE)[5]	Northing (mN)[6]	Elevation (m)[7]
1986	1.40	8	9.40	50	18.8	698498	5127915	1183.5
1987	1.65	8	9.65	50	19.3	698498	5127915	1183.5
1988	1.25	8	9.25	50	18.5	698498	5127915	1183.5
1989	1.55	8	9.55	50	19.1	698498	5127915	1183.5
1990	1.53	8	9.53	50	19.1	698498	5127915	1183.5

1. H1H = High First High.
2. µg/m^3 = micrograms per cubic meter.
3. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.
4. UTM = Universal Transverse Mercator; NAD27 = North American Datum 1927.
5. mE = meters Easting.
6. mN = meters Northing.
7. m = meter(s).

The annual PM_{10} concentrations ranged from about 9.3 to 9.7 µg/m^3, less than 20% the NAAQS or MAAQS. The results for the Class II increment consumption analysis for the 24-hour and annual periods are given in Table 3 and 4, respectively, for each met year.

Table 3. 24-Hour PM_{10} Class II Increment Consumption Results.

Met Year	H2H[1] Increment Consuming Sources PM_{10} 24-Hour (µg/m^3)[2]	Class II PM_{10} 24-Hour Increment (µg/m^3)	H2H Receptor Location UTM (NAD27)[4]			Pass? (% of increment)
			Easting (mE)[5]	Northing (mN)[6]	Elevation (m)[7]	
1986	23.27	30	697830	5126140	1203.0	Yes (77.6)
1987	22.35	30	699063	5126295	1189.4	Yes (74.5)
1988	19.37	30	697674	5126259	1194.1	Yes (64.6)
1989	25.58	30	697930	5126140	1208.6	Yes (85.3)
1990	19.69	30	697724	5126261	1200.6	Yes (65.6)

1. H2H = High Second High.
2. µg/m^3 = micrograms per cubic meter.
3. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.
4. UTM = Universal transverse Mercator; NAD27 = North American Datum 1927.
5. mE = meters Easting.
6. mN = meters Northing.
7. m = meter(s).

The modeling results for the 24-hour PM_{10} Class II increment analysis indicated over 85% of the increment was consumed using the 1989 met year data.

Table 4. Annual PM_{10} Class II Increment Consumption Results.

Met Year	H1H[1] Increment Consuming Sources PM_{10} Annual ($\mu g/m^3$)[2]	Class II PM_{10} Annual ($\mu g/m^3$)	H1H Receptor Location UTM (NAD27)[4]			Pass? (% of increment)
			Easting (mE)[5]	Northing (mN)[6]	Elevation (m)[7]	
1986	1.38	17	698498	5127915	1183.5	Yes (8.1)
1987	1.63	17	698498	5127915	1183.5	Yes (9.6)
1988	1.23	17	698498	5127915	1183.5	Yes (7.2)
1989	1.53	17	698498	5127915	1183.5	Yes (9.0)
1990	1.51	17	698498	5127915	1183.5	Yes (8.9)

1. H1H = High First High.
2. $\mu g/m^3$ = micrograms per cubic meter.
3. NAAQS/MAAQS = National Ambient Air Quality Standard/Montana Ambient Air Quality Standard.
4. UTM = Universal Transverse Mercator; NAD27 = North American Datum 1927.
5. mE = meters Easting.
6. mN = meters Northing.
7. m = meter(s).

Less than 10% of the annual Class II increment was consumed, regardless of the met year, by the BMCM sources.

VII. Taking or Damaging Implication Analysis

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

VIII. Environmental Assessment

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

DEPARTMENT OF ENVIRONMENTAL QUALITY
Permitting and Compliance Division
Air Resources Management Bureau
P.O. Box 200901, Helena, Montana 59620
(406) 444-3490

FINAL ENVIRONMENTAL ASSESSMENT (EA)

Issued For: BMP Investments Incorporated
490 North 31st Street, #308
Billings, MT 59101

Air Quality Permit Number: 3179-03

Preliminary Determination Issued: 4/09/08
Department Decision Issued: 4/25/08
Permit Final: 5/13/08

1. *Legal Description of Site:* BMCM is located in the Bull Mountains approximately 16 miles southeast of Roundup, Montana, and approximately 35 miles northeast of Billings, Montana. The legal description of the site is Section 12, West ½ Section 13, and Section 14, Township 6 North, Range 26 East, in Musselshell County, Montana.

2. *Description of Project:* BMCM submitted a permit application to modify Permit #3179-02 to install a new coal preparation plant with a maximum annual production of 15 million tons of coal. BMCM will remove the existing coal preparation plant and associated storage piles once the new plant is operating.

3. *Objectives of the Project:* The issuance of Permit #3179-03 would allow BMCM to implement the above mentioned project during the development phase of the mining operation.

4. *Alternatives Considered:* In addition to the proposed action, the Department also considered the "no-action" alternative. The "no-action" alternative would deny issuance of the Montana Air Quality permit to the facility. However, the Department does not consider the "no-action" alternative to be appropriate because BMCM demonstrated compliance with all applicable rules and regulations as required for permit issuance. Therefore, the "no-action" alternative was eliminated from further consideration.

5. *A Listing of Mitigation, Stipulations, and Other Controls*: A listing of the enforceable permit conditions and a permit analysis, including a BACT analysis, would be contained in Permit #3179-03.

6. *Regulatory Effects on Private Property Rights*: The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined the permit conditions would be reasonably necessary to ensure compliance with applicable requirements and to demonstrate compliance with those requirements and would not unduly restrict private property rights.

7. The following table summarizes the potential physical and biological effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Terrestrial and Aquatic Life and Habitats			X			yes
B.	Water Quality, Quantity, and Distribution			X			yes
C.	Geology and Soil Quality, Stability, and Moisture			X			yes
D.	Vegetation Cover, Quantity, and Quality			X			yes
E.	Aesthetics			X			yes
F.	Air Quality			X			yes
G.	Unique Endangered, Fragile, or Limited Environmental Resource			X			yes
H.	Demands on Environmental Resource of Water, Air, and Energy			X			yes
I	Historical and Archaeological Sites			X			yes
J.	Cumulative and Secondary Impacts			X			yes

Summary of Comments on Potential Physical and Biological Effects:
The following comments have been prepared by the Department.

A. Terrestrial and Aquatic Life and Habitats;
B. Water Quality, Quantity, and Distribution;
C. Geology and Soil Quality, Stability, and Moisture;
D. Vegetation Cover, Quantity, and Quality; and
E. Aesthetics

Overall impacts to the physical and biological environmental parameters noted above would be minor because the activities would occur within the current mining area with little or no additional surface disturbance. Furthermore, the current permit action would allow operation of coal Stockpiles #1, #2, #3, and #4 during the development phase of the mining operation, within the currently approved mine plan area. There would be a small increase in air pollutant deposition in the area and in the use of water for dust suppression. Overall, the demands and impacts to terrestrial and aquatic life and habitats; water quality, quantity, and distribution; geology and soil quality, stability, and moisture; vegetation cover, quantity, and quality; and aesthetics related to the increased activities would be minor.

F. Air Quality

The air quality impacts from the increased activities would be minor because Permit #3179-03 would include conditions limiting the visible emissions (opacity) from the plant operations, and would require water and/or chemical dust suppressant and other means to control air pollution. The plant operations would continue to be limited by Permit #3179-03 to total emissions of 250 TPY or less from non-fugitive sources, including any additional equipment used at the site. This facility would continue to be considered a minor source of air pollution for the Title V program, because the facility's potential emissions would be below 100 TPY. Overall, air emissions from the increased activities would have minor impacts on air quality in the immediate and surrounding area because of the relatively small amount of additional pollutants generated. Air pollution controls currently used at the facility, such as fabric filtration, chemical stabilization and/or water suppression, would reduce air emissions from equipment operations, storage piles, and haul roads.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The increased activities would occur within the previously disturbed industrial site at the mine. As part of the MEPA analysis on initial mine development, assessments of potential impacts to unique endangered, fragile, or limited environmental resources were done by the Department, including contact with the Montana Natural Heritage Program – Natural Resource Information System (NRIS) to identify species of special concern at the mine site. Search results concluded there are no such species of special concern in the area. Area, as defined in the MNHP search, is the township and range of the proposed site, with an additional 1 mile buffer. However, just outside the defined area the search indicated the occurrence of one such species of special concern. The species of special concern identified by MNHP is *Corynorhinus townsendii* (Townsend's Big Eared Bat). The likelihood that the operation of coal Stockpiles #1, #2, #3, and #4 during the development phase of the mining operation would impact unique endangered, fragile, or limited environmental resources would be minor because of the relatively small potential emissions, the lack of change to the mine plan area, and the conditions placed in Permit #3179-03.

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

The increased activities would require minimal additional amounts of water, air, and energy. Limited amounts of water would be required to be used for dust control for the equipment, product stockpiles, and surrounding haul roads. Further, as described in Section 7.F. of this EA, pollutant emissions generated from the operation would have minimal impacts on air quality in the immediate and surrounding area because of the relatively small increase in emissions, the lack of change to the mine plan area, and the conditions placed in Permit #3179-03. Overall, the demands and impacts to the environmental resource of water, air, and energy related to the increased activities would be minor.

I. Historical and Archaeological Sites

The increased activities would occur within the previously disturbed industrial site at the mine. According to past correspondence from the Montana State Historic Preservation Office, there is low likelihood of adverse disturbance to any known archaeological or historic site because of previous industrial disturbance within the area. Therefore, the likelihood that the increased activities would have an impact on historical or archaeological sites would be minor.

J. Cumulative and Secondary Impacts

The increased activities from the project would cause minor cumulative and secondary impacts to the physical and biological aspects of the human environment. There would be a relatively small increase in air emissions of particulate matter and PM_{10} and no increase in the mine plan area.

8. The following table summarizes the potential economic and social effects of the proposed project on the human environment. The "no-action" alternative was discussed previously.

		Major	Moderate	Minor	None	Unknown	Comments Included
A.	Social Structures and Mores				X		yes
B.	Cultural Uniqueness and Diversity				X		yes
C.	Local and State Tax Base and Tax Revenue			X			yes
D	Agricultural or Industrial Production			X			yes
E.	Human Health			X			yes
F.	Access to and Quality of Recreational and Wilderness Activities			X			yes
G	Quantity and Distribution of Employment				X		yes
H.	Distribution of Population				X		yes
I.	Demands for Government Services			X			yes
J.	Industrial and Commercial Activity			X			yes
K.	Locally Adopted Environmental Plans and Goals				X		yes
L.	Cumulative and Secondary Impacts			X			yes

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

A. Social Structures and Mores
B. Cultural Uniqueness and Diversity

The Department determined that the current permit action would not have an impact on the social structures and mores or the cultural uniqueness and diversity of this area of operation because the operation of a coal stockpiles #1, #2, #3,and #4, during the development phase of the mining operation, is relatively minor and the activities would occur within the previously disturbed industrial area. The surrounding area would remain unchanged as a result of the proposed project.

C. Local and State Tax Base and Tax Revenue

The increased activities would have little or no impact on the local and state tax base and tax revenue. No full time, permanent employees would be added as a result of issuing Permit #3179-03. The increase in the amount of equipment at the site would be minimal.

D. Agricultural or Industrial Production

The increased activities would occur within the previously disturbed industrial area; therefore, the Department would not expect an impact to or displacement of agricultural production. The increased activities would be relatively small compared to the existing mining operation and would have only a minor impact on local industrial production. In addition, the facility would operate within the permitted mining area, which upon completion

of mining operations, would be reclaimed, as specified, by the Environmental Management Bureau (EMB) of the Department. Minor and temporary effects may occur to agricultural land, and the EMB would be responsible for oversight of any reclamation activities. Therefore, impacts to agricultural or industrial production would be minor.

E. Human Health

Permit #3179-03 would incorporate conditions to ensure that the increased activities would be accomplished in compliance with all applicable air quality rules and standards. These rules and standards are designed to be protective of human health. As noted in Section 7.F. of this EA, the air emissions from this facility would be minimized by fabric filtration, water spray and/or chemical stabilization, and opacity limitations. Furthermore, the increased activities and resulting air emissions would be relatively small. Therefore, any associated impacts to human health would be minor based as a result of compliance with the applicable standards and operational conditions and limitations incorporated within the permit.

F. Access to and Quality of Recreational and Wilderness Activities

The increased activities would occur within the previously disturbed industrial property and would not impact access to recreational and wilderness activities. Minor impacts on the quality of recreational activities could be created from the noise from the increased activities; however, these would be small in comparison to existing activities. Emissions from the operation would be minimized as a result of the conditions that would be placed in Permit #3179-03. Therefore, the associated impacts on the access to and quality of recreational and wilderness activities would be minor.

G. Quantity and Distribution of Employment; and
H. Distribution of Population

As a result of the relatively small size of the operations associated with the increased activities, the quantity and distribution of employment and the distribution of population in the area would not be impacted. No full time, permanent employees would be added as a result of issuing Permit #3179-03 and no related secondary employment would be expected. Therefore, no impacts to the distribution of population in the area would be expected.

I. Demands of Government Services

Minor increases may be observed in the local traffic on existing roads in the area. Limited additional government services including the acquisition of and maintaining compliance with appropriate permits would be required relative to these operations. Overall, demands for government services would be minor.

J. Industrial and Commercial Activity

The increased activities would represent only a minor increase in the industrial activity in the area because the operation of coal stockpiles #1, #2, #3, and #4 would operate during the primary phase of the mining operation. No additional commercial activity would result because no secondary activities are expected to move to the area as a result of the increased activities. Overall, only a minor increase in industrial and commercial activity would be expected as a result of the proposed project.

K. Locally Adopted Environmental Plans and Goals

The Department is not aware of any locally adopted environmental plans or goals that would be affected by the proposed project. The state standards would protect the proposed site and the environment surrounding the site.

L. Cumulative and Secondary Impacts

The increased activities would cause minor cumulative and secondary impacts to the social and economic aspects of the human environment in the immediate area because of the small increase in potential air emissions. Increases in traffic would have minor impacts on the local traffic in the immediate area. Because the project would be a relatively small increase of particulate emissions compared to the current operation, only minor economic impacts to the local economy would be expected. New businesses would not be drawn to any areas and permanent jobs would not be created or lost as a result of the proposed project. Overall, the proposed project would have minor impacts to the cumulative and secondary impacts to the social and economic aspects of the human environment.

Recommendation: An Environmental Impact Statement (EIS) is not required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: All potential effects resulting from the proposed increase in activities are minor; therefore, an EIS is not required. In addition, the source would be applying the Best Available Control Technology and the analysis indicates compliance with all applicable air quality rules and regulations.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Department of Environmental Quality - Permitting and Compliance Division; Montana Natural Heritage Program; and State Historic Preservation Office.

Individuals or groups contributing to this EA: Montana Department of Environmental Quality (Air Resources Management Bureau), Montana Natural Heritage Program, and State Historic Preservation Office (Montana Historical Society).

EA prepared by: Trista Glazier
Date: March 27, 2008