



February 27, 2015

Signal Peak Energy, LLC
100 Portal Drive
Roundup, Montana 59072

Dear Mr. Weber:

Montana Air Quality Permit #3179-11 is deemed final as of February 27, 2015, by the Department of Environmental Quality (Department). All conditions of the Department's Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For the Department,

A handwritten signature in black ink that reads "Julie Merkel".

Julie Merkel
Air Permitting Program Supervisor
Air Resources Management Bureau
(406) 444-3626

A handwritten signature in black ink that reads "Craig Henrikson".

Craig Henrikson, P.E.
Environmental Engineer
Air Resources Management Bureau
(406) 444-6711

JM:CH
Enclosure

Montana Department of Environmental Quality
Permitting and Compliance Division

Montana Air Quality Permit #3179-11

Signal Peak Energy, LLC
100 Portal Drive
Roundup, Montana 59072

February 27, 2015



MONTANA AIR QUALITY PERMIT

Issued To: Signal Peak Energy, LLC
100 Portal Drive
Roundup, Montana 59072

MAQP: #3179-11
Application Complete: 12/18/2014
Preliminary Determination Issued: 01/23/2015
Department Decision: 02/11/2015
Permit Final: 02/27/2015
AFS #: 065-0003

A Montana Air Quality Permit (MAQP), with conditions, is hereby granted to Signal Peak Energy, LLC (SPE), 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

SPE is located in the Bull Mountains approximately 12 miles southeast of Roundup, Montana, and approximately 35 miles north 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. A description of the permitted equipment is contained in the Section I.A of the MAQP analysis

B. Current Permit Action

On November 10, 2014, the Department received an application for modification of SPE's air quality permit for creating a new waste disposal area identified as WDA2. The current waste disposal area (WDA1) is nearing the end of its design capacity and a new waste disposal area will be needed to maintain the current coal production rates. The proposed maximum disturbance area for WDA2 and associated facilities is approximately 376 acres. Additionally, on December 18, 2014, SPE requested that an administrative amendment, originally submitted on December 11, 2014, be combined with the November 10, 2014, request. The administrative amendment had requested a change to allow up to 150,000 tons of material to be shipped via over-the-road semi-trucks. The two requests are being combined into a single permit action and the application complete date is being used as December 18, 2014.

SECTION II: Conditions and Limitations

A. Emission Limitations

1. Coal production from the facility shall be limited to 15.0 million tons during any rolling 12-month (ARM 17.8.749).
2. SPE shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal an opacity in excess of the following (ARM 17.8.340 and 40 Code of Federal Regulations (CFR) 60, Subpart Y):

- a. For sources constructed, reconstructed, or modified on or before April 28, 2008: 20%
 - b. For sources constructed, reconstructed, or modified after April 28, 2008: 10%.
3. SPE shall not cause or authorize emissions to be discharged into the outdoor atmosphere from any non-Subpart Y affected sources installed after November 23, 1968, 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).
 4. 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.2 and Section II.A.3 (ARM 17.8.752).
 5. SPE shall use a fabric filter baghouse to control process particulate emissions from surface crushing operations (ARM 17.8.752).
 6. SPE is authorized to maintain the following coal stockpiles (ARM 17.8.749):
 - a. Stockpiles #1A (temporary), not to exceed a total surface area of 22.6 acres and a throughput of 2.0 million tons per rolling 12-month time period.
 - b. Stockpile #1 (Run-of-Mine (ROM), #2 (raw coal), Stockpile #3, and Stockpile #4 (piles #3 and #4 are combined clean coal), not to exceed a total surface area of 26.3 acres.
 7. SPE may operate topsoil/subsoil storage piles (including waste disposal area (WDA) topsoil/subsoil stockpiles) not to exceed a total surface area of 142.5 acres (ARM 17.8.749).
 8. SPE shall convey coal from Stockpiles #3 and #4 to either the product loadout conveyor directly or to product silos only (ARM 17.8.752).
 9. SPE shall operate all crushers within an enclosed building (ARM 17.8.752).
 10. SPE 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).
 11. Crushing production is limited to 15.0 million tons during any rolling 12-month time period (ARM 17.8.749).
 12. SPE 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).
 13. 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).

14. SPE shall incorporate a fixed stacker for both the ROM and clean coal stockpiles during the primary phase of the project (ARM 17.8.752).
15. SPE shall utilize and maintain the following emission control techniques as necessary to minimize particulate emissions (ARM 17.8.749 and ARM 17.8.752):
 - a. Enclose all coal and waste material conveyors. Conveyors shall be enclosed on the top and sides with a partial opening on the bottom.
 - b. Provide 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).
 - c. Use watering and/or chemical dust suppressants and contouring techniques to control particulate emissions from the coal stockpiles.
 - d. 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.
 - e. Employ watering and/or chemical dust suppressant, contouring, compaction techniques, and re-vegetation to reduce emissions from the topsoil storage piles.
 - f. 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.
 - g. Develop, implement, and maintain good housekeeping practices to keep coal and waste material transfer locations clean.
 - h. Chemically stabilize all active haul and access roads and supplement by watering.
 - i. Restrict and maintain vehicle speeds on haul roads as necessary to minimize emissions.
 - j. Haul roads shall be graded and maintained as necessary to minimize fugitive dust emission; including the removal of loose debris and the application of chemical dust suppressants and/or water.
16. SPE shall maintain a fugitive dust control plan. Elements of the plan shall include, but not be limited to, the conditions established within Section II.A.15 (ARM 17.8.749 and ARM 17.8.752).
17. SPE 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).

18. SPE 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.17 (ARM 17.8.749).
19. SPE shall not operate more than two boilers at any given time and each boiler shall not exceed a maximum design capacity of 500,000 British Thermal Units per hour (Btu/hr) each (ARM 17.8.749).
20. SPE shall power the 500,000 Btu/hr boilers using propane (ARM 17.8.749).
21. SPE 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).
22. SPE is limited to a maximum of 150,000 tons of coal to be shipped via over-the-road semi-trucks during any rolling 12-month period (ARM 17.8.749).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. SPE 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. SPE shall notify the Department of any construction or improvement project conducted pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, 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. The notice must be submitted to the Department, in writing, 10 days prior to startup 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 SPE 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. SPE shall document, by month, coal production from the mine. By the 25th day of each month, SPE 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.1. A written report of the compliance verification shall be submitted along with annual emission inventory (ARM 17.8.749).
5. SPE shall document, by month, the crushing production from the facility. By the 25th day of each month, SPE 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.11. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
6. SPE shall document, by month, the amount of coal shipped via over-the-road semi-trucks. By the 25th day of each month, SPE shall calculate the coal shipped via over-the-road semi-trucks 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.22. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

D. Ambient Monitoring Requirements

SPE 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).

SECTION III: General Conditions

- A. Inspection – SPE 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 (continuous emissions monitoring system (CEMS), continuous emissions rate monitoring system (CERMS)) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and the terms, conditions, and matters stated herein shall be deemed accepted if SPE fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving SPE of the responsibility for complying with any applicable federal or Montana statute, rule or standard, except as specifically provided in ARM 17.8.740, *et seq.* (ARM 17.8.756).

- D. Enforcement – Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement action as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefor, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If 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, failure to pay the annual operation fee by SPE may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Duration of Permit – Construction or installation must begin or contractual obligations entered into that would constitute substantial loss within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall expire (ARM 17.8.762).

Attachment 1
 AMBIENT AIR MONITORING PLAN
 Signal Peak Energy, LLC
 MAQP #3179-11

1. This ambient air monitoring plan is required by Montana Air Quality Permit (MAQP) #3179-11, which applies to the Signal Peak Energy, LLC (SPE), coal mining operation southeast 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. SPE shall install, operate and maintain three air monitoring sites in the vicinity of the mine and facilities as described in Item 4 below. Two air monitoring sites will measure particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) and one air monitoring site collects meteorological measurements. 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. SPE 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. SPE shall monitor the following parameters at the sites and frequencies described below:

AIRS # & Site Name	UTM Coordinates	Parameter	Frequency
30-065-0007		PM-10 ¹ (primary) 81102 and 85101	Every sixth day
		Wind Speed, Direction and Sigma Theta 61101,61102 and 61106	Continuous
Plant Area (Downwind) 30-065-0007		PM-10 (Collocated ²) 81102 and 85101	Every twelfth day
Plant Area (Upwind) 30-065-0006		PM-10	Every sixth 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. (Data Recovery = (Number of data points collected in evaluation period)/(number of scheduled data points in evaluations period)*(100%))
6. Any ambient air monitoring changes proposed by SPE must be approved in writing by the Department.
7. SPE shall utilize air monitoring and quality assurance (QA) 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. SPE shall submit two hard copies of the quarterly data reports within 45 days after the end of the calendar quarter and two hard copies of the 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 data submittals shall consist of a hard copy narrative data summary and a digital submittal of all data points in AIRS batch code format. The electronic data must be submitted to the Air Monitoring Section as digital text files readable by an office PC with a Windows operating system.

The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:

- a. A hard copy of the individual data points,
 - b. The first and second highest 24-hour concentrations for PM₁₀
 - c. The quarterly and monthly wind roses,
 - d. A summary of the data completeness,
 - e. A summary of the reasons for missing data,
 - f. A precision data summary,
 - g. A summary of any ambient air standard exceedances, and
 - h. Q/A-Q/C information such as zero/span/precision, calibration, audit forms, and standards certifications.
10. The annual data report shall consist of a narrative data summary. The narrative data hard copy summary must be submitted to the Air Compliance Section and shall include:
 - a. A topographic map of appropriate scale with UTM coordinates and a true north arrow showing the air monitoring site location in relation to the refinery and the general area,

- b. The year's four highest 24-hour concentrations for PM₁₀,
 - c. The annual wind rose,
 - d. A summary of any ambient air standard exceedances, and,
 - e. An annual summary of data completeness.
11. All records compiled in accordance with this Attachment must be maintained by SPE 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 (Administrative Rules of Montanan (ARM) 17.8.749).
12. The Department may audit (or may require SPE 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.

13. The hard copy reports should be sent to:

Department of Environmental Quality
Air Resources Management Bureau
1520 East 6th Avenue
Helena, MT 59620-0901
Attn: Air Compliance Section Supervisor

14. The electronic data from the quarterly monitoring shall be sent to:

Department of Environmental Quality
Air Resources Management Bureau
1520 East 6th Avenue
Helena, MT 59620-0901
Attn: Air Monitoring Section Supervisor

Montana Air Quality Permit (MAQP) Analysis
Signal Peak Energy, LLC
MAQP #3179-11

I. Introduction/Process Description

Signal Peak Energy, LLC (SPE) owns and operates the Bull Mountain Mine which is an underground coal mining operation near Roundup, Montana. The facility is located approximately 12 miles southeast of Roundup, Montana, and approximately 35 miles north of Billings, Montana.

A. Permitted Equipment

The Bull Mountain Mine is permitted to produce 15 million tons of raw coal per year. The primary facilities include the underground mining operation, a centralized coal preparation plant, fixed conveyor systems, storage systems, and a railroad loadout station. Operations also include various auxiliary and associated equipment, including; haul trucks, loaders, scrapers, dozers, and various conveyors and transfer stations.

B. Source Description

The SPE operations at the facility can be classified into four categories; underground mining, coal handling and storage, coal processing, and waste disposal. Coal is underground mined by room and pillar and longwall methods. A continuous miner is used to develop coal entries in order to establish longwall panels, and longwall equipment used to extract coal panels. A conveyor belt is used to transfer the Run Of Mine (ROM) coal to a stockpile outside of the mine portal.

Surface material storage facilities include stockpiles of ROM coal, clean coal, and reject material from the wash plant. Material is moved from inside the mine to the ROM stockpile on a high capacity belt conveyor. Other conveyors are used to transport coal from the ROM pile to the coal cleaning facility and from there to the clean coal piles.

The primary facility rejects approximately 20 percent of the raw coal stream. These coal processing wastes and other mine development wastes are permanently disposed of in the Waste Disposal Area (WDA1 or WDA2) located 1.4 miles northeast of the wash plant. The mine plan calls for re-vegetation of this area after completion of the project and after the appropriate seed bed preparation.

During operations, coal is dumped from the mine portal onto a conveyor which dumps onto Stockpile #1. From Stockpile #1 the coal is conveyed to the preparation plant stockpile (Stockpile #2). Coal from Stockpile #2 is either conveyed to the preparation plant or the blended coal stockpile (Stockpile #3). Stockpile #1A is utilized to store excess coal during longwall move and unplanned downtime. Haul trucks are used to transport coal between Stockpile #1A and the other coal stockpile areas. Reject material is conveyed to either WDA1 or WDA2.

Coal sent to the preparation plant is washed, dewatered, and then conveyed to the clean coal stockpile (Stockpile #4). No dryer is used in the proposed preparation plant. Waste and reject material is transferred via conveyor belt to either WDA1 or WDA2. Loaders and haul trucks are used within the WDA perimeters to move material into desired locations for compaction.

Coal from Stockpiles #3 and #4 are 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

MAQP #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. **MAQP #3179-01** replaced MAQP #3179-00.

On November 21, 2006, the Department of Environmental Quality (Department) received a request from BMP for a modification to MAQP #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, (ft²))
- ROM coal stockpile site preparation (topsoil removal – dozer)
- Topsoil storage pile (surface area: 100,000 ft²)
- 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. **MAQP #3179-02** replaced MAQP #3179-01.

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

On November 21, 2008, the Department received a request from BMCM for a modification to MAQP #3179-03. BMCM requested an administrative amendment to MAQP #3179-03 to transfer ownership of the permit from BMCM to SPE. **MAQP #3179-04** replaced MAQP #3179-03.

On January 19, 2010, SPE requested an administrative amendment to MAQP #3179-04 to change the business/ mailing address from 490 North 31st Street, Suite 308, Billings, MT 59101 to 100 Portal Drive, Roundup, Montana 59072. On July 31, 2009, SPE also requested an administrative amendment pursuant to the Administrative Rules of Montana (ARM) 17.8.745, to more accurately reflect the number and size of coal and soils stockpiles at the facility. Specifically, SPE requested the following amendments:

- that the surface area of the run-of-mine (ROM) coal stockpile be changed from 11.9 acres to 3.43 acres,
- that one of the four coal stockpiles be renamed from Stockpile #1, to Stockpile #1A (temporary), and that the maximum surface area of each coal stockpile be changed from 4.6 acres to 6.6 acres,
- that the number of topsoil/subsoil storage piles be changed from one to nine and that the maximum surface area of each topsoil/subsoil storage pile be changed from 2.3 acres to 5.5 acres, and,
- that SPE may operate two WDA topsoil/subsoil storage piles each not to exceed a surface area of 35 acres.

MAQP #3179-05 replaced MAQP #3179-04.

On March 9, 2010, the Department received an email from SPE requesting that the Monitoring Plan in MAQP 3179-05 be updated and requesting that the Permit Analysis more clearly describe the actual configuration of the mine operations and associated stockpiles. In addition, the following requests were addressed in the permit:

- The Department received a letter from SPE, dated March 24, 2010, which included a Title V Applicability Analysis of Stationary Source Emissions. The analysis clarified that the two 35,000 British Thermal Units per hour (BTU/hr) coal-fired boilers listed in previous versions of the MAQP were never installed. Instead, two 500,000 BTU/hr propane fueled boilers were installed to supply heat to the shop and warehouse.
- A July 27, 2010, phone conversations and email correspondences between the SPE and the Department clarified that the coal wash plant baghouse had never been installed.
- A March 23, 2011, letter requested that the Department remove the reporting requirements for the 35,000 BTU/hr coal combustion boilers. The letter also clarified that SPE no longer screens coal at the site, and requested that the limitations and

reporting requirements associated with the screening of the coal be removed. Because the mine has completed the development phase, SPE requested that the limitations and reporting requirements associated with the development phase of the mine be removed.

The permit action incorporated the requested updates and clarifications into the MAQP. The existing soil and coal stockpiles were summarized in Table 1 below, and changes to the list of emitting units were made to the emissions inventory. In addition to accounting for these changes, the current permit action updated the permit to reflect current permit language and rule references, used by the Department. **MAQP #3179-06** replaced MAQP #3179-05.

Table 1: Stockpiles Built and/or Designed

Stockpile	Size (acre)	PM ₁₀ Emissions (tpy)
Coal Stockpiles		
Stockpile #1 (ROM)	3.43	0.19
Stockpile #2 (ROM)	2.13	0.12
Stockpile #3 & #4 (Clean)	6.60	0.36
Stockpile #1A (Temporary)	3.36	0.18
<i>Coal Total</i>	<i>15.52</i>	<i>0.85</i>
Soils Stockpiles		
Waste Disposal Area Topsoil	7.00	0.0273
Waste Disposal Area Subsoil	35.00	0.1365
Topsoil #1 (Silo Area)	1.95	0.0076
Subsoil #1 (Silo Area)	5.50	0.0215
Topsoil #2 (Loop Area)	5.10	0.0199
Subsoil #2 (Loop Area)	3.21	0.0125
Subsoil #2A (Loop Area)	2.10	0.0082
Madison Well Soil	0.56	0.0022
Area 1A Soil	1.12	0.0044
<i>Soils Total</i>	<i>61.54</i>	<i>0.2400</i>
Total Stockpile Emission		1.09

Note: Stockpiles Table 1 provided by SPE.

On August 1, 2013, the Department received a request from SPE for an administrative amendment pursuant to ARM 17.8.745 to modify the number and or size of the permitted coal and soil stockpiles at the Bull Mountain Mine. SPE also requested that an updated summary of the particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) emissions from the stockpiles be included in the permit. The revised emissions were based on the maximum acreage of each stockpile, maximum coal throughput in tons per year (tpy), standard emissions control efficiencies, and documented AP-42 emissions factors. The updated PM₁₀ emissions account for coal handling emissions that were listed separately from the stockpile emissions in previous versions of the permit. The soil and coal stockpiles are summarized in Table 2 below, and changes to the emissions inventory were made. **MAQP #3179-07** replaced MAQP #3179-06.

Table 2 Proposed Stockpiles – MAQP#2179-07

Stockpile	Size (acre)	PM ₁₀ Emissions (tpy)
Coal Stockpiles		
Stockpile #1 (ROM)	3.70	26.58
Stockpile #2 (ROM)	2.20	26.24
Stockpile #3 & #4 (Clean)	6.60	27.24
Stockpile #1A (Temporary)	9.50	4.73
<i>Coal Total</i>	<i>22.0</i>	<i>84.80</i>
Soils Stockpiles		
WDA Topsoil #1	8.40	0.96
WDA Topsoil #2	3.00	0.34
WDA Subsoil #1	24.00	2.74
WDA Subsoil #2	4.40	0.50
WDA Subsoil #3	3.70	0.42
WDA Suitable Subsoil	11.50	1.31
RR Topsoil	5.30	0.60
RR Subsoil	6.00	0.68
Silo Topsoil	2.30	0.26
Silo Subsoil	3.10	0.35
Temp Waste Area Topsoil	0.10	0.01
Temp Waste Area Subsoil	0.50	0.06
WDA Haul Rd Area Subsoil	0.20	0.02
Madison Well 1 Topsoil	0.20	0.02
Madison Well 1 Subsoil	0.30	0.03
Madison Well 3 Topsoil	0.20	0.02
Madison Well 3 Subsoil	0.40	0.05
Area 1A Topsoil	0.80	0.09
Area 1A Subsoil	2.80	0.32
<i>Soil Total</i>	<i>77.20</i>	<i>8.80</i>
Total Stockpile Emission		92.60

*Note:
Stockpiles
Table 2
provided by
SPE.*

On
January 8,
2014, the

Department received a request from SPE for an administrative amendment pursuant to ARM 17.8.745 to modify the size of a permitted coal stockpile (Temporary Coal Stockpile #1A) at the Bull Mountain Mine. The permit action modified the size of the Temporary Coal Stock pile #1A from 9.50 acres to 10.40 acres and updates the associated potential to emit estimate. **MAQP #3179-08** replaced MAQP #3179-07.

On August 19, 2014, the Department received a complete application for modification of SPE’s air quality permit for the proposed increase in the storage capacity and annual throughput allowance for the coal Stockpile #1A. The modification was requested to allow SPE to maintain sufficient coal storage during longwall moves, unplanned downtime and coal train delays. The permit action increased permitted coal storage capacity to 22.6 acres and the annual throughput to 2 million tpy. **MAQP #3179-09** replaced MAQP #3179-08

On October 31, 2014, the Department issued MAQP #3179-09 to authorize an expansion of coal Stockpile #1A. With the initial description of the permit action under Section I.B of the permit the Department erroneously listed the units of the proposed capacity increase

in tons rather than the appropriate unit in acres. This action clarified the allowable increase to the permitted coal capacity of Stockpile #1A to be 22.6 acres and an annual throughput of 2 million tons per year. **MAQP #3179-10** replaced MAQP #3179-09.

D. Current Permit Action

On November 10, 2014, the Department received a complete application for modification of SPE's air quality permit for creating a new waste disposal area identified as WDA2. The current waste disposal area (WDA1) is nearing the end of its design capacity and a new waste disposal area will be needed to maintain the current coal production rates. The proposed maximum disturbance area for WDA2 and associated facilities is approximately 376 acres. Additionally, on December 18, 2014, SPE requested that an administrative amendment, originally submitted on December 11, 2014, be combined with the November 10, 2014, request. The administrative amendment had requested a change to allow up to 150,000 tons of material to be loaded and shipped via over-the-road semi-trucks. The two requests are being combined into a single permit action and the application complete date is being used as December 18, 2014. **MAQP #3179-11** replaces MAQP #3179-10.

E. Additional Information

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

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the ARM and are available, upon request, from the Department. Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

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

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.
3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

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

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

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

1. ARM 17.8.204 Ambient Air Monitoring
2. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide (SO₂)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO₂)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O₃)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H₂S)
7. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter (PM)
8. ARM 17.8.221 Ambient Air Quality Standard for Visibility
9. ARM 17.8.222 Ambient Air Quality Standard for Lead
10. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀
11. ARM 17.8.230 Fluoride in Forage

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

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

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions are taken to control emissions of airborne particulate matter. (2) Under this rule, SPE 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 or authorize 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, Title 40 of the Code of Federal Regulations (CFR), Part 60, Standards of Performance for New Stationary Sources (NSPS). SPE is considered an NSPS affected facility under 40 CFR Part 60 and is subject to the requirements of the following subparts.
 - a. 40 CFR 60, Subpart A – General Provisions apply to all equipment or facilities subject to an NSPS Subpart as listed below.
 - b. 40 CFR Part 60, Subpart Y - Standards of Performance for 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 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. SPE submitted the appropriate permit application fee for the current action.
2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit (excluding an open burning permit) issued by the Department. The air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

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

- 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, modify, or use any air contaminant sources that have the potential to emit (PTE) greater than 25 tpy of any pollutant. SPE has a PTE greater than 25 tpy of PM and PM₁₀; therefore, an air quality permit is required.
 3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
 4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
 5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements.

(1) This rule requires that a permit application be submitted prior to installation, modification, or use of a source. SPE submitted the appropriate 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. SPE submitted an affidavit of publication of public notice for the January 14, 2015, issue of the *Roundup Record Tribune* and the *Winnett Times*, papers of general circulation in the Town 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. The required BACT analysis is included in Section III of this permit analysis.
 8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.

9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving SPE 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 17.8.760 Additional Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those applications that require an environmental impact statement.
 12. 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 modified 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.
 13. 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).
 14. 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.
 15. 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.

This facility is not a major stationary source because this facility is not a listed source and the facility's PTE is below 250 tpy of any pollutant (excluding fugitive emissions). In addition, the current permit action is an administrative change and is not associated with an increase in emissions. Therefore, a PSD review is not required.

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 tpy of any pollutant;
 - b. PTE > 10 tpy of any single hazardous air pollutant (HAP), PTE > 25 tpy of combined HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tpy of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program. (1) Title V of the FCAA amendments of 1990 requires that all sources, as defined in ARM 17.8.1204(1), obtain a Title V Operating Permit. In reviewing and issuing MAQP #3179-11 for SPE, the following conclusions were made:
 - a. The facility's PTE is less than 100 tpy for any pollutant (excluding fugitive emissions).
 - b. The facility's PTE is less than 10 tpy for any single HAP and less than 25 tons/year for combined HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is subject to current NSPS standards (40 CFR 60, Subpart Y).
 - e. This facility is not subject to a current NESHAP standard.
 - f. This source is not a Title IV affected source, or a solid waste combustion unit.
 - g. This source is not an EPA designated Title V source.

Based on these facts, the Department determined that SPE is a minor source of emissions as defined under Title V, and SPE 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, SPE will be required to obtain a Title V Operating Permit.

III. BACT Determination

A BACT determination is required for each new or modified source. SPE shall install on the new or modified source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized.

For the proposed WDA modification, SPE proposed five control options to address fugitive dust from the new waste disposal area. The following were evaluated as control options.

1. Relying on excess surface moisture
2. Compacting and consolidating finer reject particles
3. Compacting waste material in place to prevent suspension
4. Reducing time between stripping of WDA2 topsoil and revegetation
5. Backstowing coal prep plant waste material in underground mine

SPE has selected options 1, 2, and 3 for BACT for the new waste disposal area (WDA2). The combination of these three options is accepted as BACT.

For the proposed hauling of over-the-road semi-trucks and the resulting increase in particulate emissions, SPE provided four control options to address fugitive dust.

1. Water Spray – 50% control efficiency
2. Chemical dust suppressant – 75% control efficiency
3. Paving road surfaces
4. Limiting vehicle speed

Upon SPE's analysis of the four options, chemical dust suppressant was selected as BACT for the haul road emissions. Chemical dust suppressant is accepted as BACT.

The control options selected have controls and control costs comparable to other recently permitted similar sources and are capable of achieving the appropriate emission standards.

IV. Emission Inventory

Table - Emissions from Soil Stockpiles

Soil Stockpile	Area (Acres)	PM ₃₀ Emissions (tpy)	PM ₁₀ Emissions (tpy)	PM _{2.5} Emissions (tpy)	
WDA Topsoil #1	8.40	3.19	0.96	0.14	
WDA Topsoil #2	3.00	1.14	0.34	0.05	
WDA Subsoil #1	24.00	9.12	2.74	0.41	
WDA Subsoil #2	4.40	1.67	0.50	0.08	
WDA Subsoil #3	3.70	1.41	0.42	0.06	
WDA Suitable Subsoil	11.50	4.37	1.31	0.20	
RR Topsoil	5.30	2.01	0.60	0.09	
RR Subsoil	6.00	2.28	0.68	0.10	
Silo Topsoil	2.30	0.87	0.26	0.04	
Silo Subsoil	3.10	1.18	0.35	0.05	
Temp Waste Area Topsoil	0.00	0.00	0.00	0.00	
Temp Waste Area Subsoil	0.00	0.00	0.00	0.00	
WDA Haul Rd Area Subsoil	0.20	0.08	0.02	0.00	
Madison Well 1 Topsoil	0.20	0.08	0.02	0.00	
Madison Well 1 Subsoil	0.30	0.11	0.03	0.01	
Madison Well 3 Topsoil	0.20	0.08	0.02	0.00	
Madison Well 3 Subsoil	0.40	0.15	0.05	0.01	
Area 1A Topsoil	0.80	0.30	0.09	0.01	
Area 1A Subsoil	2.80	1.06	0.32	0.05	
WDA Topsoil #3	2.60	0.99	0.30	0.04	
WDA Topsoil #4	3.80	1.44	0.43	0.06	
WDA Topsoil #5	9.40	3.57	1.07	0.16	Attributable to WDA2
WDA Subsoil #4	8.40	3.19	0.96	0.14	
WDA Subsoil #5	21.10	8.02	2.41	0.36	
WDA Subsoil #6	20.60	7.83	2.35	0.35	
TOTAL	142.50	54.15	16.25	2.44	
AP-42 References					
Wind Erosion EF = 0.38 ton/acre/yr	Table 11.9-4				
Soil TSP to PM ₁₀ Conversion = 0.30	Table 13.2.2-1, Public Roads				
Notes					
1. Small, temporary soil piles would contribute insignificant emissions and are exempted from these calculations					

Table Particulate Emissions

Emission Category	PM ₃₀	PM ₁₀	PM _{2.5}
Unpaved Road Fugitive Dust	921.62	260.11	26.63
Disturbed Areas	256.12	76.84	11.53
Conveyor Transfers	25.72	12.17	1.82
Train Loadout	1.50	0.45	0.07
Soil Stockpiles	54.15	16.25	2.44
Coal Stockpiles	<u>166.84</u>	<u>79.34</u>	<u>11.90</u>
TOTAL Fugitive Sources	1425.96	445.15	54.38
Point Sources (Baghouses)	<u>4.88</u>	<u>4.88</u>	<u>0.73</u>
TOTAL Mine Sources	1430.84	450.03	55.11

V. Existing Air Quality

The Bull Mountain Mine is located approximately 12 miles southeast of Roundup, Montana. The air quality in this areas is currently unclassifiable/attainment for all National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality Standards (MAAQS) pollutants. The closest nonattainment areas (NAA) are the 1-hour and 24-hour SO₂ NAA in Billings and Laurel, located approximately 35 and 45 miles, respectively, southeast of the mine. A CO maintenance area also exists in the Billings area.

Ongoing monitoring of PM₁₀ concentrations at the site has been performed since initial development of the mine by SPE. The recorded values confirmed the designated PM₁₀ ambient air quality status throughout the monitoring period. This data is on file with the Department.

VI. Ambient Air Impact Analysis

The Department determined that the impacts from this permitting action will be minor as the proposed action results in a minor emissions increase from the facility and current monitored values indicate that ambient concentrations sufficiently below the prescribed PM₁₀ NAAQS/MAAQS to accommodate the proposed increase. Therefore, the Department believes it will not cause or contribute to a violation of any ambient air quality standard.

VII. Taking or Damaging Implication Analysis

As required by 2-10-105, MCA, the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

VIII. Environmental Assessment

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

Analysis prepared by: C. Henrikson

Date: December 29, 2014

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 To: Signal Peak Energy, LLC

Montana Air Quality Permit Number (MAQP): MAQP#3179-11

Preliminary Determination Issued: 1/23/2015

Department Decision Issued: 2/11/2015

Permit Final: 2/27/2015

1. *Legal Description of Site:* Signal Peak Energy, LLC (SPE) operates an underground coal mine located approximately 12 miles southeast of Roundup, Montana. The mine covers portions of Section 12, West ½ Section 13, and Section 14, Township 6 North, Range 26 East, in Musselshell County, Montana.
2. *Description of Project:* SPE submitted a permit application to modify MAQP#3179-10 for a new waste disposal area (WDA2) which would replace waste disposal area one (WDA1). A second request under the same permit action, also provides for loading and hauling of up to 150,000 tons per year of product on to over-the-road semi-trucks.
3. *Objectives of Project:* The issuance of MAQP #3179-11 would authorize SPE to begin development of WDA2 while WDA1 nears the ends of its useful life and is restored and provide for up to 150,000 tons of loading and hauling of product on to over-the-road semi-trucks.
4. *Alternatives Considered:* In addition to the proposed action, the Department of Environmental Quality – Air Resources Management Bureau (Department) also considered the “no-action” alternative. The “no-action” alternative would deny issuance of the air quality preconstruction permit to the proposed facility. However, the Department does not consider the “no-action” alternative to be appropriate because SPE 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 list of enforceable conditions, including a BACT analysis, would be included in MAQP #3179-11.
6. *Regulatory Effects on Private Property:* The Department considered alternatives to the conditions imposed in this permit as part of the permit development. The Department determined that the permit conditions are reasonably necessary to ensure compliance with applicable requirements and demonstrate compliance with those requirements and do 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.

Potential Physical and Biological Effects							
Item	Description	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

Air quality impacts from the current permit action would be minor as the proposed action replaces WDA1 with a larger WDA2. It would also provide for coal loading of semi-trucks for over-the-road shipping. The emissions increase under this proposed action is limited to small increases in emissions. As such the Department has determined that any additional impact to terrestrial and aquatic life and habitats related to the current permit action would not be minor.

B. Water Quality, Quantity and Distribution

This project would expect to have a little additional effect on the water quality, quantity, and distribution due to the use of water and or chemical application for fugitive dust suppression. Particulate matter emissions from disturbance of soils and underlying subsurface material would be deposited at varying distance within the mine boundary and beyond depending upon particle size, location of release and immediate meteorological conditions. However, with the nature of pollutants and generally good dispersion in the area, only minor pollutant deposition on surface waters near the project area are expected to occur from these disturbances and associated roadways. Any air emissions from this source would not likely impact groundwater. Water would be required for fugitive dust suppression within the mine site; however water use is not expected to increase substantially with the current permit action and any water spray for dust suppression would likely result in the water being evaporated to the atmosphere shortly after its application which minimizes water quality concerns. Therefore, the Department has determined that the impacts to the water quality, quantity, and distribution would likely be minor.

C. Geology and Soil Quality, Stability and Moisture

The activities associated with the current permit action would be conducted within the boundaries of the existing Bull Mountain Mine. Further, the air quality permit associated with this project would contain limitations and conditions to minimize emissions to areas beyond the permit boundary effectively reducing the potential impact. Therefore, the Department has determined that any additional impacts to the geology and soil quality, stability, and moisture related to the current permit action would be minor.

D. Vegetation Cover, Quantity, and Quality

The particulate matter emissions increase from this project would be expected to present no additional impact on the surrounding vegetation with respect to cover, quantity and quality. The potential increase in emissions would be minor; therefore, the Department has determined that any additional impacts to the vegetation cover, quantity, and quality related to the current permit action would be minor.

E. Aesthetics

There will be minimal new equipment added to the mine site and activity levels, including noise, would be consistent with existing coal mine operations. Specifically, a conveyor modification and new tractor will be necessary and additional semi-truck traffic. There are visual emissions associated with the proposed action which would be representative of current conditions. Therefore, Department has determined that the additional impacts to the aesthetics related to the current permit action would be minor.

F. Air Quality

The area surrounding the proposed project is unclassifiable/attainment for the NAAQS for all criteria air pollutants. The Department believes that current concentrations of criteria pollutants in the area are at or near background levels and well below any NAAQS levels.

The Department has determined that the amount of increased particulate emissions resulting from the proposed project would not create additional degradation and any such impact to air quality from the proposed project would be to be minor.

G. Unique Endangered, Fragile, or Limited Environmental Resources

The current permit action 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. NRIS identified ten (10) animal species of concern within the proposed area of WDA2. Due to the location of the WDA2 within the existing mine and the minor increase in potential emissions, the Department determined that impacts to unique endangered, fragile, or limited environmental resources associated with the current permit action would be minor.

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

The current permitting action would have a minor impact to the demand on environmental resources of water, air, and energy. Additional demand for water and energy will be required for WDA activities and fugitive dust suppression. However, these demands are expected to be representative of current levels. Pollutant emissions generated from the proposed permit action would have limited demands on air because of the conditions placed in MAQP #3179-11. Overall, the Department determined that the demands on the environmental resource of water, air, and energy related to the current permit action would be minor.

I. Historical and Archaeological Sites

The current permit action would occur adjacent to previously disturbed industrial areas at the mine. According to correspondence from the Montana State Historic Preservation Office, previous inventories conducted in the general vicinity of the proposed project did not occur in the specific sections proposed for WDA2. There is some potential to disturb archaeological or historic sites because of lack of previous cultural inventories within the area. SPE will continue to need to be aware of the potential to disturb archaeological or historic sites contacting appropriate officials, if any are found. Therefore, the Department determined that the likelihood that the current permit action would have an impact on historical or archaeological sites would be minor.

J. Cumulative and Secondary Impacts

The cumulative and secondary impacts from the proposed project on physical and biological receptors in the immediate area due to an increase in emissions from the proposed project would be expected to be minor. Air pollution from the facility would be controlled by Department-determined BACT, as discussed in Section III of the permit analysis, along with the limitations and conditions in MAQP #3179-11. The Department believes that this facility could be expected to operate in compliance with all applicable rules and regulations as outlined within the air quality permit.

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.*

Potential Social and Economic Effects							
Item	Description	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

Potential Social and Economic Effects							
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

The current permitting action would not create additional disruption to any native or traditional lifestyles or communities (social structures or mores) in the area as the project will occur within the boundary of the existing mine and a minor increase in emissions is expected. The Department is not aware of any current utilization by native or traditional communities. Therefore no known impact to social structures and mores would be expected.

B. Cultural Uniqueness and Diversity

The Department determined that the current permit action would not have any additional impact on the cultural uniqueness and diversity of this area of operation because the proposed project 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 current permit action will not have an impact on the local and state tax base and tax revenue due to this permit action as no additional coal production will result and no new employees are planned as a result of this project. Therefore the cumulative impact to the tax base and revenue will not result. If the project were not approved, it would have a negative impact to the tax base and tax revenue.

D. Agricultural or Industrial Production

The current permit action would occur within some beef grazing agricultural land and also within previously disturbed industrial area; therefore and will result in a decrease in production of this agricultural land. WDA1 be eventually be reclaimed as WDA2 goes into operation returning some land back into agricultural production. Therefore, the overall impacts to agricultural or industrial production would be minor.

E. Human Health

The proposed project would result in a minor increase in emissions due to the additional WDA expansion and additional truck traffic. Further MAQP #3179-11 contains limitations and conditions including, but not limited to, the BACT requirements discussed in Section III of the permit analysis, to ensure that the operations would maintain compliance with all applicable rules and standards. These rules and standards are designed to be protective of human health. Therefore any impact to human health from the proposed project would be expected to be minor.

F. Access to and Quality of Recreational and Wilderness Activities

The current permit action would occur within the existing mine boundary and would not impact access to recreational and wilderness activities. Emission increases from the proposed project would be minor and will not likely present any additional impacts to the quality of recreational activities. No designated wilderness areas would be impacted by the project. Therefore, the associated impacts on the access to and quality of recreational and wilderness activities would likely not occur.

G. Quantity and Distribution of Employment

According to SPE the proposed project would not necessitate the hiring of additional employees; therefore no effect on the quantity and distribution of employment would be expected as a result of the expansion.

H. Distribution of Population

No full time or permanent employees would be added as a result of proposed project associated with MAQP #3179-11. Therefore the distribution of population in the area would not be impacted as a result of the current permit action.

I. Demands for Government Services

Government services would be required for acquiring the appropriate permits from government agencies and for ongoing interaction with SPE. Multiple permitting actions are required including a revision to the Mining Permit, an MPDES water discharge permit and associated storm water permits. A MSHA approval of an additional “refuse pile plan” will also be needed. The proposed project would not likely increase the need for government service resources beyond the current capacity. As a result of this project any addition demands for government services would be expected to be minor.

J. Industrial and Commercial Activity

The proposed project would not result in an increase in production from the mine site, the industrial activity would be commensurate with current operations, and minimal additional equipment or manpower would be requirement. As such, no additional increases to industrial and commercial activity would be expected to occur.

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.

L. Cumulative and Secondary Impacts

Overall, cumulative and secondary impacts from this project would result in only minor impacts to the social and economic aspects addressed. The Department believes SPE would be expected to operate in compliance with all applicable rules and regulations as outlined in MAQP #3179-11.

Recommendation: No Environmental Impact Statement (EIS) is required.

If an EIS is not required, explain why the EA is an appropriate level of analysis: The current permitting action is for a proposed increase in waste disposal area volume which results in only minor impacts to items addressed within this EA. It also provides for truck loading of product to covered over-the-road semi-trucks. MAQP #3179-11 includes conditions and limitations to ensure the facility will operate in compliance with all applicable rules and regulations. In addition, there are no significant impacts associated with this proposal.

Other groups or agencies contacted or which may have overlapping jurisdiction: Montana Historical Society – State Historic Preservation Office, Natural Resource Information System – Montana Natural Heritage Program

Individuals or groups contributing to this EA: Department of Environmental Quality – Air Resources Management Bureau

EA prepared by: Craig Henrikson

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