DEQ
Montana Department
of Environmental Quality

December 20, 2023

Dusty Weber
Signal Peak Energy, LLC
Bull Mountain Mine
100 Portal Drive
Roundup, Montana 59072

Sent via email: dweber@signalpeakenergy.com

RE: Final Permit for MAQP #3179-13

Dear Mr. Weber:

Montana Air Quality Permit (MAQP) #3179-13 is deemed final as of December 20, 2023, by DEQ. This permit is for Signal Peak Energy-Bull Mountain Mine. All conditions of the Decision remain the same. Enclosed is a copy of your permit with the final date indicated.

For DEQ,

Julie A. Merkel
Permitting Services Section Supervisor
Air Quality Bureau
(406) 444-3626

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

Enclosure

Montana Department of Environmental Quality
Air, Energy & Mining Division
Air Quality Bureau

Montana Air Quality Permit #3179-13

Signal Peak Energy, LLC
Bull Mountain Mine
100 Portal Drive
Roundup, Montana 59072

December 20, 2023

MONTANA AIR QUALITY PERMIT

Issued To:	Signal Peak Energy, LLC Bull Mountain Mine 100 Portal Drive Roundup, Montana 59072	MAQP: #3179-13 Application Received: 08/04/2023 Application Complete: 10/06/2023 Preliminary Determination: 11/06/2023 Department Decision: 12/04/2023 Permit Final: 12/20/2023

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. Underground activities for mining also occur in additional sections in both Township 6 North, Range 26 East and Township 6 North, Range 27 East. A description of the permitted equipment is contained in the Section I.A of the MAQP analysis

B. Current Permit Action

DEQ received an air quality permit application on August 4, 2023, to modify the existing permit to increase the allowable tonnage of coal which can be shipped via semi-truck. The application also requests the removal of the permit condition requiring an ambient air quality monitoring station. DEQ had previously approved removal of the monitoring station network in a February 3, 2017, correspondence. No additional coal mining is approved with the action, as the limit in the air quality permit remains at 15 million tons during any rolling 12-month period. On September 26, 2023, DEQ issued an incompleteness determination for the current application to which Signal Peak responded with the requested information on October 6, 2023. The primary information missing from the application was a Best Available Control Technology (BACT) analysis related to emitting units generating particulate matter and fugitive dust. The application was considered complete with the October 6, 2023, response.

The items requested in the application are as noted below:

- Increase coal shipping tonnage via semi-truck from 150,000 tons to 700,000 tons annually;
- Addition of stoker coal loadout infrastructure (Conveyor and Elevated bin for gravity truck loading) up to 10,000 tons which is included in the 700,000 ton total)

- Addition of two small stoker/clean coal stockpiles (Stoker Piles A and B) (2.4 acres and 1.6 acres) , respectively near the Preparation Plant
- Update the air permit mapping and emissions calculations to include Plate Press Building #2 and the associated conveyor;
- Administrative removal of Ambient Air Monitoring Station previously approved for removal by DEQ in 2017.

Emission increases (PM_{10}) associated with the application are estimated at approximately 19 tons per year (tpy) with the majority being attributable to fugitive road dust from travel on existing unpaved haul roads.

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 time period (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% Opacity.

   b. For sources constructed, reconstructed, or modified after April 28, 2008: 10% Opacity.

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.

c. Stoker A Stockpile (Approximately 2.4 acres)

d. Stoker B Stockpile (Approximately 1.6 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 140.7 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 700,000 tons of coal to be shipped via over-the-road semi-trucks during any rolling 12-month period (ARM 17.8.749).

23. SPE shall utilize partial covering and minimizing drop heights as BACT for the Plate Press Building #2 conveyor system (ARM 17.8.749 and ARM 17.8.752).

24. SPE shall utilize a combination of a fully enclosed conveyor and loading bin, with minimum drop height from the bin to the trucks (ARM 17.8.749 and ARM 17.8.752).

25. SPE shall utilize filter cake compaction and the inherently elevated moisture as BACT to minimize fugitive dust for the Plate Press Building #2 (ARM 17.8.749 and ARM 17.8.752).

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).

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).

Montana Air Quality Permit (MAQP) Analysis
Signal Peak Energy, LLC
MAQP #3179-13

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.

MAQP #3179-13 also provided the addition of two small coal stockpiles which are identified as Stoker Stockpile A and Stoker Stockpile B. The addition of stoker coal loadout infrastructure (conveyor and elevated bin) was also added under MAQP #3179-13. Further an updated was made to include Plate Press Building #2 and its associated conveyor.

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, (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. **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
Coal Total	*15.52*	*0.85*
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
Soils Total	*61.54*	*0.2400*
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 (PM_{10}) 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 PM_{10} 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#3179-07

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
Coal Total	*22.0*	*84.80*
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
Soil Total	*77.20*	*8.80*
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.

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** replaced MAQP #3179-10.

The Department received an application for an administrative amendment of SPE's air quality permit on December 7, 2015. The action proposed to increase the fill area, depth and capacity for WDA1, reconfiguration of the soil stockpiles at WDA1 and WDA2 which lead to a reduction in total footprint, and a reduction in total disturbed area at any given time. The project lead to an overall reduction in fugitive dust emission from wind erosion. This permit action reflected these changes. **MAQP#3179-12** replaced MAQP#3179-11.

D. Current Permit Action

On August 4, 2023, DEQ received an application for a modification for increasing the allowable coal shipped via truck, and to clean-up a number of items including the removal of their ambient monitoring network which had been approved for removal by DEQ in 2017. The action does not increase the amount of coal allowed to be mined.

The items covered in the application include:

- Increase coal shipping tonnage via semi-truck from 150,000 tons to 700,000 tons annually;
- Addition of stoker coal loadout infrastructure (Conveyor and Elevated bin for gravity truck loading) up to 10,000 tons which is included in 700,000 ton total)
- Addition of two small stoker/clean coal stockpiles (Stoker Piles A and B) (2.4 acres and 1.6 acres), respectively near the Preparation Plant
- Update the air permit mapping and emissions calculations to include Plate Press Building #2 and the associated conveyor;
- Administrative removal of Ambient Air Monitoring Station previously approved for removal by DEQ in 2017.

The changes to the particulate matter (PM_{10}) emission inventory are shown below.

Total Particulate Emissions as Proposed				As Permitted, #3179-12	
Emission Category	PM_{30} Tons/Yr	PM_{10} Tons/Yr	$PM_{2.5}$ Tons/Yr	PM_{10} Tons/Yr	Increase
Unpaved Road Fugitive Dust	968.52	273.48	27.96	260.11	13.37
Paved Road Fugitive Dust	6.22	1.24	0.31	0.00	1.24
Disturbed Areas	240.01	72.00	10.80	72.00	0.00
Conveyor Transfers	29.68	14.04	2.11	12.17	1.87
Train and Truck Loadout	10.39	2.22	0.23	0.45	1.77
Soil Stockpiles	53.47	16.04	2.41	16.04	0.00
Coal Stockpiles	168.72	80.28	12.04	79.34	0.94
TOTAL Fugitive Sources	1477.00	459.30	55.86	440.11	19.19
Point Sources (Baghouses)	4.88	4.88	0.73	4.88	0.00
TOTAL Mine Sources	**1481.88**	**464.18**	**56.59**	**444.99**	**19.19**

MAQP #3179-13 replaces MAQP #3179-12.

E. Response to Public Comments

One comment was received on the preliminary determination.

Commentor	Draft Permit Comment	DEQ Response
Montana Environmental Information Center	According to the PD, DEQ is proposing to grant the requested MAQP in order to facilitate the increase in allowable tonnage of coal which can be shipped from the Bull Mountain Mine via semitruck from 150,000 tons per year to 700,000 tons per year. The PD and associated EA are devoid of any information on where this proposed increase in coal shipped from the Mine is going.	DEQ does not regulate where the Bull Mountain Mine may transport coal over the road. Nor does it have the authority to do so. Emissions related to the transport of coal are limited to emissions that occur at the permitted mine site, and DEQ's authority to regulate these emissions does not carry over onto transport routes outside the mine boundaries.
	There is also zero analysis on greenhouse gas emissions and associated climate impacts. The draft environmental assessment and acceptability determination for Bull Mountains Mine Amendment 4 (AM4) suffered from the same flaws. See Attachment A, Bull Mountains Mine Amendment 4 Acceptability and MEPA Comments (Oct. 10, 2023),	As previously stated in the PD, DEQ is aware of the recent district court opinion in *Held v. State*, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstitutional.[1] While the *Held* order is on appeal, DEQ is seeking a stay of the district court's order until the Montana Supreme Court fully determines the issues on appeal. DEQ's

	which are hereby incorporated herein by reference.	brief in support of the motion, explains DEQ's position regarding this issue. [1] *Held v. State*, No. CDV-2020-307 (Mont. 1st Jud. Dist. Ct. Aug. 14, 2023). DEQ has responded to the Amendment 4 comments as part of the EA specific to that Coal permitting action, and that can be found on DEQ's website. The response can be found in the document titled AM4 Final Environmental Assessment on this page link: Permit Correspondence - myCOAL (mt.gov)
	It is well settled law in federal courts under the framework of the National Environmental Policy Act that federal agencies are required to consider in environmental analyses not only the direct emissions that will result from the development of projects that facilitate fossil fuel production or transport, but also the downstream, indirect impacts of the combustion of the fossil fuels that are produced or transported as a result (or whose production or transportation is facilitated as a result) of the action in question and that are, by definition, reasonably foreseeable results of such projects.1 Courts have upheld and echoed this reasoning in numerous contexts, including, relevant here, coal transport,2 mine plan modifications,3 and oil and gas development,4 to name a few. Despite the significant level of greenhouse gas ("GHG") emissions associated with the production,	Proposed change: The permitted activity and the impacts stemming therefrom concern fugitive dust control, not the ultimate combustion of coal, which is beyond the scope of the permitted state action. Potential impacts from any eventual combustion of coal do not have a reasonably close causal relationship to the permitted activity and are thus outside the scope of this MEPA analysis.

	transport, and combustion of coal from the Bull Mountain Mine, DEQ has not disclosed, nor has it analyzed, the quantity of emissions or the climate harming impacts thereof. These unlawful omissions violate the Montana Environmental Policy Act ("MEPA") and the Montana First Judicial District Court's order in Held v. State, that permanently enjoined Section 75-1- 201(2)(a), MCA, which had unlawfully and unconstitutionally prohibited state agencies from disclosing and analyzing the harmful climate impacts of fossil fuel permitting decisions in associated MEPA reviews. Held v. State, No. CDV-2020-307 (Mont. First Jud. Dist. Ct. Aug. 14, 2023) (Findings of Fact, Conclusions of Law, and Order at 102). As such, in this permitting decision, DEQ has failed to take the hard look at climate change required by MEPA.	

F. 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 (SO_2)
3. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide (NO_2)
4. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide (CO)
5. ARM 17.8.213 Ambient Air Quality Standard for Ozone (O_3)
6. ARM 17.8.214 Ambient Air Quality Standard for Hydrogen Sulfide (H_2S)
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 PM_{10}
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. A permit fee is not required for the current permit action because the permit action is considered an administrative amendment permit change.

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 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 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 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. SPE submitted an affidavit of publication of public notice for the August 16, 2023, issue of the Roundup Record-Tribune and Winnett Times.

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 (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 MAQP #3179-13 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 PM_{10} 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.

A BACT analysis was submitted by SPE in permit application #3179-13, addressing some available methods of controlling particulate matter and fugitive dust. The DEQ reviewed these methods, as well as previous BACT determinations. The following control options have been reviewed by the DEQ in order to make the following BACT determinations related to particulate matter.

Particulate Matter

Plate Press Building #2

Waste material from the Prep Plant Thickener is routed to the Plate Press Building #2 in the form of a coal/water mixture containing approximately 30% solids. The enclosed plate and frame press operates intermittently, providing surge capacity to complement Plate Press Building #1 when underground coal recovery is lower. The frame and plate press removes most of the water from this coal/water mixture using hydraulic pressure to produce a filter cake with approximately 25% moisture content.

The filter cake exits the building on the Plate Press Building #2 discharge conveyor. The building itself is entirely enclosed. Due to the moisture content and compacted condition of the filter cake, very little dust is generated in the building. Therefore, as with Plate Press Building #1, no dust collection or control device is warranted. SPE proposes filter cake compaction and the inherently elevated moisture as BACT for the Plate Press Building #2.

Plate Press Building Conveyor

The Plate Press Building #2 conveyor carries on average less than 200,000 tons per year

of filter cake. This conveyor transfers material to a radial stacking conveyor, where it may either be stacked in a stoker pile (if saleable) or more typically, transferred to a tower and conveyed back to the Prep Plant and the overland conveyor to the Waste Disposal Area. In this process the material goes through at most three conveyor transfers. SPE evaluated a passive enclosure dustless transfer system for these conveyor transfers, but it proved to be cost-prohibitive. Given the low volume handled by the Plate Press Building #2 conveyor, dustless transfer would be only marginally effective. Uncontrolled annual PM_{10} emissions from these three transfers will be less than 0.03 tons per year. Therefore, SPE proposes partial covering and minimizing drop heights as BACT for the Plate Press Building #2 conveyor system.

Stoker Coal Loadout Conveyor and Bin

The Stoker Coal Loadout conveyor and truck loading bin are both fully enclosed, as evidenced by the photos in the attachment to this letter. Particulate emissions from the Stoker Coal Loadout will be limited to the loading of stoker coal from the loading bin onto commercial trucks. Since the stoker coal sales will not exceed 10,000 tons per year, PM_{10} emissions will be negligible. SPE proposes as BACT the combination of fully enclosed conveyor and loading bin, with minimum drop height from the bin to the trucks.

Semi-Trucks

Fugitive dust from over-the-road (OTR) semi-truck traffic will be managed according to SPE's existing fugitive dust control plan. The plan specifies the application of water spray or chemical dust suppressant to minimize emissions. DEQ has recognized this method as BACT for dust control on mine haul roads. SPE will also maintain existing speed limits along the haul route to further minimize fugitive emissions from OTR truck traffic.

As part of the BACT analysis, SPE evaluated the control cost associated with paving the 2.1-mile, OTR truck haul road through the mine property. This option is not realistic because heavy mining equipment also uses this road. However, for disclosure purposes, a cost analysis was performed, yielding nearly $15,000 per ton of PM_{10} eliminated. Thus, paving the road is neither cost-effective nor technically practical. SPE also evaluated BACT for OTR truck loading. SPE envisions an automated truck loadout system if the volume of coal delivery via OTR trucks increases as may be anticipated. The BACT analysis indicates that an automated truck loadout is not cost effective solely for emissions control, even at the maximum throughput of 700,000 tons per year. For this permit action, SPE proposes to continue using front-end loaders and water application as BACT for the OTR truck loadout.

Fugitive dust from the two stoker coal piles will be controlled by watering as needed. This control method is specified for all coal stockpiles in SPE's fugitive dust control plan, and has been approved as BACT by DEQ.

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. The BACT determinations have been incorporated into new permit conditions, as appropriate. Several of the new emitting units are already covered by existing permit conditions and the requirements in the existing Fugitive Dust Control Plan.

IV. Emission Inventory

Table: Particulate Emissions

Emission Category	PM_{30}	PM_{10}	$PM_{2.5}$
Unpaved Road Fugitive Dust	921.62	260.11	26.63
Disturbed Areas	240.01	72.00	10.80
Conveyor Transfers	25.72	12.17	1.82
Train Loadout	1.50	0.45	0.07
Soil Stockpiles	53.47	16.04	2.41
Coal Stockpiles	166.84	79.34	11.90
TOTAL Fugitive Sources	1409.16	440.11	53.63
Point Sources (Baghouses)	4.88	4.88	0.73
TOTAL Mine Sources	1414.04	444.99	54.36

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 SO_2 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 PM_{10} concentrations at the site were discontinued after DEQ approved shutdown of the monitoring system in February 2017. The determination was based on review of 5 years of data without an ambient air quality exceedance and that the source was unlikely to cause or contribute to a violation of an ambient standard. The permit had not been updated since the February 2017, decision, on the discontinuation of the ambient monitoring, and therefore, is now being removed from the permit as the request is part of the current application. This change is considered an administrative change for this action as the discontinuation of the monitoring network was previously approved.

VI. Ambient Air Impact Analysis

The Department determined that there will be negligible impacts from this permitting action. Therefore, the Department determined that 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 pubic 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: Craig Henrikson
Date: October 24, 2023

Signal Peak Energy, LLC

Final Environmental Assessment for Montana Air Quality Permit #3179-13

Air Quality Bureau

APPLICANT: Signal Peak Energy, LLC		
SITE NAME: Bull Mountain Coal Mine		
PROPOSED PERMIT NUMBER: Montana Air Quality Permit (MAQP) #3179-13		
APPLICATION RECEIVED: 08/04/2023		
APPLICATION DEEMED COMPLETE: 10/06/2023		
LOCATION: 100 Portal Drive Roundup, MT 59072		**COUNTY: Musselshell**
PROPERTY OWNERSHIP:	**FEDERAL ____ STATE ____ PRIVATE _X___**	
EA PREPARER:	**C.Henrikson**	
EA Draft Date	**EA Final Date**	**Permit Final Date**
11/06/2023	**12/04/2023**	**12/20/2023**

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT

The Montana Department of Environmental Quality (DEQ) prepared this Environmental Assessment (EA) in accordance with requirements of the Montana Environmental Policy Act (MEPA). An EA functions to determine the need to prepare an Environmental Impact Statement (EIS) through an initial evaluation and determination of the significance of impacts associated with the proposed action. However, an agency is required to prepare an EA whenever, as here, statutory requirements do not allow sufficient time for the agency to prepare an EIS (ARM 17.4.607(3)). This document may disclose impacts over which DEQ has no regulatory authority.

COMPLIANCE WITH THE CLEAN AIR ACT OF MONTANA

The state law that regulates air quality permitting in Montana is the Clean Air Act of Montana (CAA), §§ 75-2-101, *et seq.*, Montana Code Annotated (MCA). DEQ may not approve a proposed action contained in an application for an air quality permit unless the project complies with the requirements set forth in the CAA and the administrative rules adopted thereunder, ARMs 17.8.101 *et. Seq.* The project is subject to approval by the DEQ Air Quality Bureau (AQB) as the potential project emissions exceed the 5 tons per year threshold of regulated pollutants for modifications of permitted facilities (ARM 17.8.743). DEQ's approval of an air quality permit application does not

relieve SPE from complying with any other applicable federal, state, or county laws, regulations, or ordinances. SPE is responsible for obtaining any other permits, licenses, or approvals (from DEQ or otherwise) that are required for any part of the proposed action. Any action DEQ takes at this time is limited to the pending air quality permit application currently before DEQ's AQB and the authority granted to DEQ under the Clean Air Act of Montana. DEQ is also reviewing an amendment through the Coal Program which is also being evaluated. DEQ issued a Draft EA on September 19, 2023, for Amendment 4 (AM4) to the Surface Mining Permit (SMP) C1993017. If approved, the amendment to the permit would be granted to expand mining operations within and outside of the current Bull Mountains Coal Mine No. 1 permit area and add 435 acres to the existing permit area. This action is not indicative of any other action DEQ may take on any future (unsubmitted) applications made pursuant to any other authority (*e.g.* Montana's Water Protection Act). DEQ will decide whether to issue the pending air quality permit pursuant to the requirements of the CAA alone. DEQ may not withhold, deny, or impose conditions on the permit based on the information contained in this Environmental Assessment. § 75-1-201(4), MCA.

SUMMARY OF THE PROPOSED ACTION

SPE has applied for an MAQP modification under the CAA to request an increase in the allowable tonnage of coal shipped via semi-truck at the Bull Mountain Mine. Under this permitting action the ambient monitoring station network was also previously approved for removal, and that requirement would now be removed from the permit as it was previously approved to be discontinued and has not been in operation for many years.

This SPE permit action has been assigned MAQP #3179-13.

All information included in the EA is derived from the permit application, discussions with the applicant, analysis of aerial photography, topographic maps, and other research tools. Information was also directly incorporated from the Draft EA issued by the Montana DEQ Coal Program on September 19, 2023. That EA is available from DEQ's website for review. Information specific to the individual resource areas from that Coal Program EA is incorporated into this EA, where it is appropriate for this air quality permitting action. Direct, secondary and cumulative determinations stated here are specific only to this air quality permitting action.

Table 1: Proposed Action Details

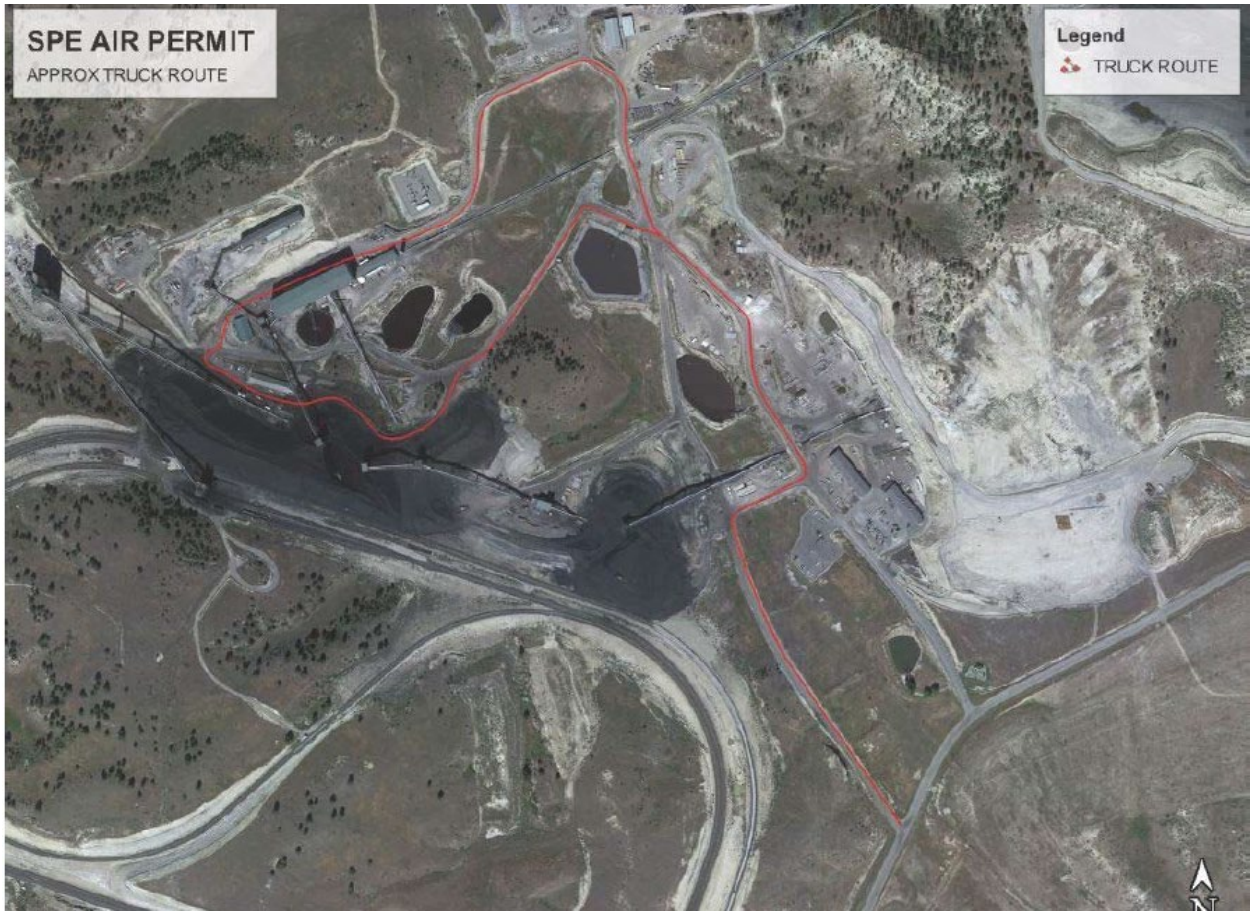
Proposed Action	
General Overview	The following permit changes would occur under the proposed action: o Increase allowable coal shipping tonnage via sem-truck from 150,000 tons to 700,000 tons annually. o Addition of stoker coal loadout infrastructure (up to 10,000 tons which is included in 700,000 total). This entails both a conveyor and a bin to accommodate truck loading. o Addition of two small stoker/clean coal stockpiles identified as Stoker Stockpile A and Stoker Stockpile B (2.4 acres and 1.6 acres) near the Preparation Plant.

	○ Update the air permit mapping and emissions calculations to include Plate Press Building #2 and associated conveyor. ○ Administrative removal of Ambient Air Monitoring Station previously approved for removal by DEQ in 2017.
Proposed Action Estimated Disturbance	
Disturbance	The only disturbance that is likely to occur would be the addition of two small clean coal stockpiles as well as minor disturbance associated with the Stoker Coal Loadout and elevated bin, approximately 4 acres of disturbance would occur for the construction of the two new Stoker stockpiles These would result in covering existing acreage with small coal stockpiles and support of the conveyor and bin. During normal operation, up to 4 acres would remain covered by the coal stockpiles. The increase in the number of semi-trucks would also result in additional dust generation for loading and vehicle miles driven on the mine haul routes. Most of the travel haul routes would occur on unpaved roads and a short distance on paved roads. These roads are currently in existence and no new road disturbance is required.
Proposed Action	
Duration	**Construction:** Construction or commencement for the new or modified sources must start within three years of issuance of the final air quality permit, otherwise the authority to construct expires. **Operational Life:** The useful remaining life of the SPE Bull Mountain mine would be limited by the permitted coal reserves and this permit action does not modify the amount of coal which may be mined.
Construction Equipment	Typical construction equipment, including cranes, coal hauling trucks, earth moving equipment (bulldozer, grader, frontend loader, backhoe, etc. would be likely for constructing the two new small coal stockpiles.
Personnel Onsite	**Construction:** Constructing the stockpiles would likely use existing personnel. **Operations:** No change is staff is necessary to accommodate the changes authorized by the air quality permit.
Location and Analysis Area	**Location**: The proposed action is located at Section 12, West ½ Section 13, and Section 14, Township 6 North, Range 26 East, in Musselshell County, Montana. Underground activities also occur in additional sections with Township 6 North, Range 26 East and Township 6, Range 27 East some of which also extend into Yellowstone County. **Analysis Area**: The area being analyzed as part of this environmental review includes the immediate project area (Figure 1), as well as

	neighboring lands surrounding the analysis area, as reasonably appropriate for the impacts being considered.
Air Quality	The Draft EA will be attached to the Preliminary Determination Air Quality Permit which would include all enforceable conditions for operation of the emitting units. Any revisions to the EA would be addressed and included in the Final EA attached to the Department's Decision.
Conditions Incorporated into the Proposed Action	The conditions developed in the Decision of the MAQP dated December 04, 2023, set forth in Sections II.A-C.

Figure 1: Map of the SPE Bull Mountain Site Plan

The figure includes the expected haul route for the additional over the road truck shipments.



PURPOSE AND BENEFIT FOR PROPOSED ACTION

DEQ's purpose in conducting this environmental review is to act upon SPE's air quality permit application No. 3179-13 and would provide for a number of facility changes but primarily to increase the allowable amount of coal shipped via semi-trucks. This benefits the facility by

expanding the amount of coal sold and shipped in semi-trucks performed using over the road semi-trucks with pup trailers with a total coal capacity of approximately 40 tons each.

Authority to SPE for operation of the Bull Mountain mine would continue until the permit is revoked, either at the request of SPE or by DEQ because of non-compliance with the conditions within the air quality permit.

REGULATORY RESPONSIBILITIES

In accordance with ARM 17.4.609(3)(c), DEQ must list any federal, state, or local, authorities that have concurrent or additional jurisdiction or environmental review responsibility for the proposed action and the permits, licenses, and other authorizations required. SPE must conduct its operations according to the terms of its permit, the CAA, §§ 75-2-101, *et seq*., MCA, and ARMs 17.8.101, *et seq*.

SPE must cooperate fully with, and follow the directives of, any federal, state, or local entity that may have authority over SPE's Bull Mountain coal facility. These permits, licenses, and other authorizations may include: Musselshell Weed Control Board, Occupational Safety and Health Administration (worker safety), DEQ AQB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), and Montana Department of Transportation and Musselshell County (road access). Since a portion of underground activities also extend into Yellowstone County, it is also possible Yellowstone County related organizations may also retain some regulatory responsibility.

EVALUATION AND SUMMARY OF POTENTIAL IMPACTS TO THE PHYSICAL AND HUMAN ENVIRONMENT IN THE AREA AFFECTED BY THE PROPOSED ACTION:

The impact analysis will identify and evaluate direct and secondary impacts. Direct impacts are those that occur at the same time and place as the action that triggers the effect. Secondary impacts mean "a further impact to the human environment that may be stimulated or induced by or otherwise result from a direct impact of the action." ARM 17.4.603(18). Where impacts are expected to occur, the impacts analysis estimates the duration and intensity of the impact.

The duration of an impact is quantified as follows:

- **Short-term**: Short-term impacts are defined as those impacts that would not last longer than the proposed operation of the site.
- **Long-term**: Long-term impacts are defined as impacts that would remain or occur following shutdown of the proposed facility.

The severity of an impact is measured using the following:

- **No Impact**: There would be no change from current conditions.
- **Negligible Impact**: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- **Minor Impact**: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- **Moderate Impact**: The effect would be easily identifiable and would change the function or integrity of the resource.
- **Major Impact**: The effect would alter the resource.

1. TOPOGRAPHY, GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:

The SPE site is located in the Bull Mountains that range in elevation from about 3,700 feet to 4,700 feet. Topography of the area is a rugged, generally mountainous terrain, dissected by ephemeral streams with higher areas or plateaus commonly capped by resistant sandstone and clinker. Resistant clinker is formed when coal burns in situ, causing metamorphic changes to the overburden. The proposed action here is limited to addition of two small clean coal stockpiles as well as minor disturbance associated with the Stoker Coal Loadout conveyor and elevated bin. These would result in covering existing acreage with small coal stockpiles and support for the conveyor and bin.

Direct Impacts: The information provided above is based on the information provided to DEQ for the SPE air quality permit application. Available information includes the permit application, analysis of aerial photography, topographic maps, and information provided for the SPE application. None of the planned disturbance at the site is considered first time disturbance. Ground surface area would be covered during construction and operation of the proposed action, approximately 4 acres of disturbance would occur for the construction of the two new Stoker stockpiles. There is negligible impact expected to topography, geology, soil quality and stability with the proposed action. However, the surface area under the coal stockpiles would be covered by coal.

Secondary Impacts: No secondary impacts to topography, geology, stability, and moisture would be expected because the proposed action occurs within the footprint of the existing mine site.

2. WATER QUALITY, QUANTITY, AND DISTRIBUTION:

Direct Impacts: The information provided above is based on the information provided by the applicant for the purpose of obtaining the pending air quality permit.

The proposed action would not be expected to impact water quality, quantity and distribution because the proposed changes are considered minor changes to their operation. Fundamentally, the coal mine operation would continue to be very similar to current operations and two new stoker stockpiles, conveyor and elevated bin are short term, and would not continue following coal mine shutdown.

No fragile or unique water resources or values are present. No impacts to water quality and quantity are expected.

Secondary Impacts: No secondary impacts to water quality, quantity and distribution would be expected, nor any impacts from stormwater runoff any different that occurs on the same haul routes that exist today.

3. AIR QUALITY:

The Bull Mountain Mine is located approximately 12 miles southeast of Roundup, Montana. The air quality in this area 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 SO_2 NAA in Laurel, located approximately 45 miles, southeast of the mine.

A CO maintenance area also exists in the Billings are but this action would not be expected to impact CO within the maintenance area.

Direct Impacts: Expected emissions from the proposed action, as submitted in the air quality permit application, are shown in the permit analysis section under Current Permit Action (page 6 of the Air Quality Analysis).

Air quality standards, set by the federal government and DEQ are enforced by the AQB and allow for pollutants at the levels permitted within the MAQP. Emission increases associated with the proposed action are limited to particulate matter increases primarily associated with fugitive road dust from the coal haul trucks. The majority of the approximately 19 tons per year of PM_{10} increases are associated with road dust from unpaved roads which would occur on the existing haul roads on the mine site.

Air pollution control equipment must be operated at the maximum design for which it is intended ARM 17.8.752(2). Limitations would be placed on the allowable emissions for the new emission sources. As part of the air quality permit application, SPE submitted a Best Available Control Technology (BACT) analysis for each emitting unit identified within this application. These proposed limits were reviewed by DEQ and incorporated into MAQP #3179-13 as federally enforceable conditions. The additional permit limits are limited to controls necessary to control fugitive dust from the proposed action as determined by DEQ.

The BACT requirements are identified in the BACT permit analysis section and incorporated into the permit conditions section of the permit.

4. VEGETATION COVER, QUANTITY AND QUALITY:

The disturbance for the proposed action is minor with the only disturbance related to a new conveyor, elevated bin and the two new stoker stockpiles.

Direct Impacts: As the proposed action would be located within the existing Bull Mountain site, the only vegetation impacted would be related to the grasses and shrubs that may be presented at those locations. The new stockpiles acreages are estimated to be a total of approximately 4 acres. Negligible impacts to vegetation cover, quantity and quality are expected.

Secondary Impacts: No secondary impacts are expected since land disturbance is negligible and the additional fugitive dust generated would not be expected to migrate off-site.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

As described earlier in Section 4. Vegetation Cover, the area impacted by the two new coal stockpiles would only be approximately 4 acres. The conveyor and bin associated with the coal stoker load-out would also represent a small above-ground footprint.

Direct Impacts: The potential impact (including cumulative impacts) to terrestrial, avian and aquatic life and habitats would be negligible, due to the minor emission increases that would occur with the proposed action.

Secondary Impacts: No secondary impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above or from the proposed action.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Direct Impacts: Previous projects including the draft EA for MSUMRA permitting action amendment AM4 issued on September 19, 2023, have conducted a review of species of concern. The proposed action here is limited to addition of two small clean coal stockpiles as well as minor disturbance associated with the Stoker Coal Loadout conveyor and elevated bin. These activities would be expected to have negligible impacts on any identified species.

Secondary Impacts: The proposed action would have no secondary impacts to endangered species because the permit conditions are protective of human and animal health and all lands involved in the proposed action and the site is currently being operated as a coal mine.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:

The Montana State Historic Preservation Office (SHPO) was not contacted as the disturbance for the proposed action is limited to stockpiling coal on top of the existing ground, and supports for a conveyor and elevated bin.

However, it is SHPO's position that any structure over fifty years of age is considered historic and is potentially eligible for listing on the National Register of Historic Places. If any structures are within the Area of Potential Effect, and are over fifty years old, SHPO recommends that they be recorded, and a determination of their eligibility be made prior to any disturbance taking place.

However, should structures need to be altered, or if cultural materials are inadvertently discovered during this proposed action, SHPO requests their office be contacted for further investigation.

Direct Impacts: No impacts to historical and archeological sites would be expected due to the minor disturbance necessary for small coal stockpiles, conveyor and the elevated bin.

Secondary Impacts: No secondary impacts to historical and archaeological sites are anticipated since the proposed action and is currently an operating coal mine site.

8. SAGE GROUSE EXECUTIVE ORDER:

The project would not be in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: http://sagegrouse.mt.gov.

Direct Impacts: The proposed action is not located within Sage Grouse habitat, so no direct impacts would occur. The general Sage Grouse habitat is approximately two miles to the south. Some of the underground workings of the existing mine do extend into Sage Grouse habitat but the air quality permit application proposal is not located in Sage Grouse Habitat.

Secondary Impacts: No secondary impacts to sage grouse or sage grouse habitat would be expected since the proposed action is not located within Sage Grouse habitat.

9. AESTHETICS:

The site is located in an area of private property. The nearest private landowner identified by SPE in the air quality permit application is a private property owner located approximately 4 miles to the south.

Direct Impacts: Visual changes to the Bull Mountain site would be negligible as the physical changes to the site are limited to the two new stoker coal stockpiles, conveyor and elevated bin. A public viewer would likely not see any of these changes due to the limited access to the site. Residents near travel routes off the mine site might see increased haul trucks depending upon shipping routes once the haul sites leave the mine site.

Secondary Impacts: No secondary impacts to aesthetics would be expected.

10. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

The site is located in an area currently operated as a coal mine. The proposed action would likely result in the use of additional diesel fuel for the semi-trucks which would haul coal. Additional water usage would also be more likely due to the increased frequency of haul truck traffic. Water and/or chemical suppressants would be used to control fugitive dust on unpaved haul roads.

Direct Impacts: Once the MAQP is final, existing operational, energy and electric demands would continue for the duration of the facility's lifetime at or near current levels with possible increases associated with use of additional diesel fuel. Additional water usage would also occur as needed to control fugitive dust in compliance with the facility's dust control plan. See the Air Quality and Water Quality sections of the EA to review the potential impacts from the proposed action regarding air and water resources.

Secondary Impacts: Additional diesel fuel deliveries may be needed depending upon the amount of coal increases transported via semi-trucks.

11. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:

The site is surrounded by private property.

Direct Impacts: No other environmental resources are known have been identified in the area beyond those discussed above. Hence, there is no impact to other environmental resources.

Secondary Impacts: No secondary impacts to other environmental resources are anticipated as a result of the proposed action.

12. HUMAN HEALTH AND SAFETY:

The applicant would be required to adhere to all applicable state and federal safety laws. The access to the public would continue to be restricted to this property.

Direct Impacts: Negligible change in impacts to human health and safety are anticipated as a result of this project action. There would be some additional haul road traffic made to and from the site. These activities however, are regulated by other state and federal laws to ensure they are operated safely.

Secondary Impacts: No secondary impacts to human health and safety are anticipated as a result of the proposed action.

13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:

The site is the only current active underground coal mine in Montana.

Direct Impacts: The proposed action only impacts the number of over the road haul trucks and does not modify the current amount of coal mined within the existing air quality permit. The additional acreage used for the two new coal stoker stockpiles, conveyor and elevated bin are already within the permitted site and therefore would not change any agricultural production. Other than possible increases in diesel fuel usage and water/chemical suppressants no other local industrial or commercial production would be expected.

Secondary Impacts: It is possible that the increased shipments of over the road coal would provide fuel for other industrial facilities but where those shipments would go is not regulated within the air quality permit.

14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

The air quality permit application indicated that no new permanent jobs would be expected under the current permit action.

Direct Impacts: The proposed action would be expected to have only minor impacts on the overall distribution of employment. The additional number of haul trucks would provide some increased demand for haul trucks and drivers, and the fuel needed for those vehicles. Contracted drivers for these services would be needed if the additional coal sales are achieved.

Secondary Impacts: It is possible that the increased shipments of over the road coal would provide need for additional contracted support personnel.

15. LOCAL AND STATE TAX BASE AND TAX REVENUES:

The proposed action would be expected to have minor impacts on the local and state tax base and tax revenue.

Direct Impacts: Local, state, and federal governments would be responsible for appraising the property, setting tax rates, collecting taxes, from the facility, employees, or landowners benefitting from this operation. A minor impact is expected on the tax base and revenue with the proposed action.

Secondary Impacts: No secondary impacts to local and state tax base and tax revenues are anticipated as a result of the proposed action.

16. DEMAND FOR GOVERNMENT SERVICES:

The proposed action is occurring at an existing coal mine site.

Direct Impacts: Compliance review and assistance oversight by DEQ AQB would be conducted in concert with other area activity when in the vicinity. The proposed action would have only minor impacts on demand for government services, mainly through oversight by DEQ and other DEQ personnel.

Secondary Impacts: No secondary impacts are anticipated on government services with the proposed action.

17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

No known local environmental plans were identified with the exceptions of the weed control plans that are pertinent to some of the areas operated by SPE. These include the 2017 Montana Noxious Weed Management Plan and to any plans or rules set forth by Musselshell and Yellowstone Counties, including the Musselshell County Weed Management Plan and the Yellowstone County Weed District Weed Management Plan. The air quality permitting action is limited to a much smaller area on the existing mine site and these weed plans would not be expected to be a factor in the current permit action.

Direct Impacts: SPE's proposed action is on property which is already zoned as Industrial. No impacts from the proposed action would be expected relative to any locally adopted community planning goals.

Secondary Impacts: No secondary impacts to the locally-adopted environmental plans and goals are anticipated as a result of the proposed action.

18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

The current site of the proposed action is an existing coal mine.

Direct Impacts: There would be no impacts to the access to wilderness activities as none are in the vicinity of the proposed action. There are no water bodies close enough to be impacted and public access is limited for the coal mine site.

Secondary Impacts: No secondary impacts to access and quality of recreational and wilderness activities are anticipated as a result of the proposed action.

19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Since no new permanent jobs are expected, negligible impacts would be expected for population and housing.

Direct Impacts: The project would not add to the population or require additional housing, therefore, no impacts to density and distribution of population and housing are anticipated.

Secondary Impacts: Some additional contract staff related to haul trucks would be possible but would likely be sources from the local communities around the area.

20. SOCIAL STRUCTURES AND MORES:

Based on the required information provided by SPE, DEQ is not aware of any native cultural concerns that would be affected by the proposed action,

Direct Impacts: The proposed action is located on an existing industrial coal mine site, no disruption of native or traditional lifestyles would be expected, therefore, no impacts to social structure and mores are anticipated.

Secondary Impacts: No secondary impacts to social structures and mores are anticipated as a result of the proposed operations.

21. CULTURAL UNIQUENESS AND DIVERSITY:

Based on the required information provided by SPE, DEQ is not aware of any unique qualities of the area that would be affected by the proposed action on this coal mine site.

Direct Impacts: No impacts to cultural uniqueness and diversity are anticipated from this project.

Secondary Impacts: No secondary impacts to cultural uniqueness and diversity are anticipated as a result of the proposed action.

22. PRIVATE PROPERTY IMPACTS:

The proposed action would take place on privately-owned land. The analysis below in response to the Private Property Assessment Act indicates no impact. DEQ does not plan to deny the application or impose conditions that would restrict the regulated person's use of private property so as to constitute a taking. Further, if the application is complete, DEQ must take action on the permit pursuant to § 75-2-218(2), MCA. Therefore, DEQ does not have discretion to take the action in another way that would have less impact on private property—its action is bound by a statute. There are private residences in the area of the proposed action. The closest residence is located approximately 4 miles to the south of the main surface site for activities.

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.

23. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Due to the nature of the proposed action, no further direct or secondary impacts are anticipated from this project.

24. CLIMATE CHANGE-RELATED LITIGATION IN MONTANA

As previously stated in the PD, DEQ is aware of the recent district court opinion in *Held v. State*, ruling the statutory prohibition on including greenhouse gas analyses in MEPA reviews unconstitutional.[1] While the *Held* order is on appeal, DEQ is seeking a stay of the district court's order until the Montana Supreme Court fully determines the issues on appeal. DEQ's brief in support of the motion, explains DEQ's position regarding this issue.

[1] *Held v. State*, No. CDV-2020-307 (Mont. 1st Jud. Dist. Ct. Aug. 14, 2023).

ADDITIONAL ALTERNATIVES CONSIDERED:

No Action Alternative: In addition to the analysis above for the proposed action, DEQ is considering a "no action" alternative. The "no action" alternative would deny the approval of the proposed action. The applicant would lack the authority to conduct the proposed activity. Any potential impacts that would result from the proposed action would not occur. The no action alternative forms the baseline from which the impacts of the proposed action can be measured.

Other Ways to Accomplish the Action: In order to meet the project objective to increase over the road shipment of coal, some form of transportation would be necessary. SPE has requested the increase in over the road coal shipments, and short of denying the request, SPE would have to pursue an alternate means of shipment, and this would only be theoretically possible using train shipments. Train options are limited due to having to use only existing rail routes which may not serve areas where coal may be used.

If the applicant demonstrates compliance with all applicable rules and regulations as required for approval, the "no action" alternative would not be appropriate. Pursuant to, § 75-1-201(4)(a), (MCA) DEQ "may not withhold, deny, or impose conditions on any permit or other authority to act based on" an environmental assessment.

CUMULATIVE IMPACTS:

Cumulative impacts are the collective impacts on the human environment within the borders of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures.

Currently, DEQ is also reviewing an amendment through the Coal Program to permit additional mining. DEQ issued a Draft EA on September 19, 2023, for Amendment 4 (AM4) to the Surface Mining Permit (SMP) C1993017. If approved, the amendment to the permit would be granted to expand mining operations within and outside of the current Bull Mountains Coal Mine No. 1 permit area and add 435 acres to the existing permit area. No other permit applications for this facility are currently pending before DEQ. Although additional permits may be necessary for this facility in the future, without a pending permit application containing the requisite information, DEQ cannot speculate about which permits may be necessary or which permits may be granted or denied. There may, therefore, be additional cumulative impacts (*e.g.* to water) associated with this facility in the future, but those impacts would be analyzed by future environmental reviews associated with those later permitting actions. This environmental review analyzes only the proposed action submitted by SPE, which is the air quality permit regulating the emissions from the equipment as listed in the "proposed action" section, above.

There are no other permitted sources of industrial emissions near the Bull Mountain Mine. SPE would have emissions including CO, VOCs, SO_2, NO_X and particulate matter as detailed in MAQP #3179-13. This action would provide for negligible increases in particulate matter and other emission increases associated with mobile emissions from semi-truck traffic. These emissions are limited thru enforceable conditions within the air quality permit. The proposed action can contribute to the ambient air quality and when future permit actions occur at SPE, these actions may require future analysis. The proposed action would not be expected to have any discernable impact. No change in the EPA air quality designation would be expected. The air quality in this area is

currently unclassifiable/attainment for all National Ambient Air Quality Standards (NAAQS) and Montana Ambient Air Quality Standards (MAAQS) pollutants.
DEQ considered potential impacts related to this project and potential secondary impacts. Due to the limited activities in the analysis area, cumulative impacts related to this proposed action would be minor. The cumulative table for any direct and secondary impacts is located at the very end of this EA. See Table III.

PUBLIC INVOLVEMENT:
Scoping for this proposed action consisted of internal efforts to identify substantive issues and/or concerns related to the proposed action. Internal scoping consisted of internal review of the EA document by DEQ Air Permitting staff. Additionally, the EA for the SPE proposed action was reviewed extensively.

Internal efforts also included queries to the following websites/ databases/ personnel:
- Montana State Historic Preservation Office
- Montana DEQ
- Musselshell County
- Montana Natural Heritage Program
- Montana Cadastral Mapping Program

A fifteen day public comment period occurs along with the Preliminary Determination on MAQP #3179-13 and is posted to the DEQ website.

OTHER GOVERNMENTAL AGENCIES WITH JURSIDICTION:
The proposed action would be fully located on privately-owned land. All applicable local, state, and federal rules must be adhered to, which, at some level, may also include other local, state, federal, or tribal agency jurisdiction. Other Governmental Agencies which may have overlapping or sole jurisdiction include but may not be limited to: Musselshell County Commission or County Planning Department (zoning), Musselshell County Weed Control Board, Occupational Safety and Health Administration or Mine Safety and Health Administration (worker safety), DEQ AQB (air quality) and Water Protection Bureau (groundwater and surface water discharge; stormwater), DNRC (water rights), and MDT and Musselshell County (road access).

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS
Under ARM 17.4.608, DEQ is required to determine the significance of impacts associated with the proposed action. This determination is the basis for the agency's decision concerning the need to prepare an environmental impact statement and also refers to DEQ's evaluation of individual and cumulative impacts. DEQ is required to consider the following criteria in determining the significance of each impact on the quality of the human environment:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact.

"Severity" is analyzed as the density of the potential impact while "extent" is described as the area where the impact is likely to occur. An example could be that a project may propagate ten noxious weeds on a surface area of 1 square foot. In this case, the impact may be a high severity over a low extent. If those ten noxious weeds were located over ten acres there may be a low severity over a larger extent.

"Duration" is analyzed as the time period in which the impact may occur while "frequency" is analyzed as how often the impact may occur. For example, an operation that occurs throughout the night may have impacts associated with lighting that occur every night (frequency) over the course of the one season project (duration).

2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur.
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts.
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values.
5. The importance to the state and to society of each environmental resource or value that would be affected.
6. Any precedent that would be set as a result of an impact of the proposed action that would commit the DEQ to future actions with significant impacts or a decision in principle about such future actions.
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

The significance determination is made by giving weight to these criteria in their totality. For example, impacts with moderate or major severity may be determined to be not significant if the duration of the impacts is considered to be short-term. As another example, however, moderate or major impacts of short-term duration may be considered to be significant if the quantity and quality of the resource is limited and/or the resource is considered to be unique or fragile. As a final example, moderate or major impacts to a resource may be determined to be not significant if the quantity of that resource is high or the quality of the resource is not unique or fragile.
Preparation of an EA is the appropriate level of environmental review under MEPA if statutory requirements do not allow sufficient time for an agency to prepare an environmental impact statement, pursuant to ARM 17.4.607. An agency determines whether sufficient time is available to prepare an environmental impact statement by comparing statutory requirements that establish when the agency must make its decision on the proposed action with the time required to obtain public review of an environmental impact statement plus a reasonable period to prepare a draft environmental review and, if required, a final environmental impact statement.

SIGNIFICANCE DETERMINATION

The severity, duration, geographic extent, and frequency of the occurrence of the direct, secondary, and cumulative impacts associated with the proposed action would be limited. SPE proposes to modify operations at the existing Bull Mountain Mine. The modification would occur completely on the existing SPE property and would provide for the opportunity to ship additional coal over the road in semi-trucks. The estimated construction disturbance is limited to the acreage that would be covered by the two new coal stoker stockpiles, an associated conveyor and elevated bin.

DEQ has not identified any significant impacts associated with the proposed action for any environmental resource. Approving SPE's air quality permit application would not set precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. DEQ would conduct a new environmental assessment for any subsequent air quality permit

applications sought by SPE. DEQ would make a decision on SPE's subsequent application based on the criteria set forth in the CAA.

DEQ's issuance of a modified MAQP to SPE for this proposed action also does not set a precedent for DEQ's review of other applications, including the level of environmental review. A decision of on the appropriate level of environmental review is made based on case-specific considerations of the criteria set forth in ARM 17.4.608.

DEQ does not believe that the proposed action has any growth-inducing or growth-inhibiting aspects or that it conflicts with any local, state, or federal laws, requirements, or formal plans. Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed state action is not predicted to significantly impact the quality of the human environment. Therefore, at this time, preparation of an EA is determined to be the appropriate level of environmental review under MEPA.

Environmental Assessment and Significance Determination Prepared By:

Craig Henrikson	**Air Quality Permitter**
Name	**Title**

EA Reviewed By:

Julie Merkel	**Permitting Services Section Supervisor**
Name	**Title**

References

Air Quality Permit Application Received August 4, 2023
Response to Incompleteness DEQ Letter Received October 6, 2023
Montana State Historical Preservation Office (SHPO) Report
Montana Natural Heritage Program
Montana Cadastral GIS Layer
Air Quality Bureau Permitted Source List-GIS Layer
Air Quality Permit MAQP #3179-12

ABBREVIATIONS and ACRONYMS

AQB – Air Quality Bureau
ARM - Administrative Rules of Montana
BACT – Best Available Control Technology
BMP - Best Management Practices
CAA – Clean Air Act of Montana
CFR - Code of Federal Regulations
CO - carbon monoxide
DEQ – Department of Environmental Quality
DNRC – Department of Natural Recourses and Conservation
EA – Environmental Assessment
EIS – Environmental Impact Statement
EPA - U.S. Environmental Protection Agency
FCAA Federal Clean Air Act
MAQP – Montana Air Quality Permit
MCA – Montana Code Annotated
MEPA – Montana Environmental Policy Act
MPDES - Montana Pollutant Discharge Elimination System
MRI – Montana Renewables, Inc.
MTNHP - Montana Natural Heritage Program
NO_X - oxides of nitrogen
PM - particulate matter
PM_{10} - particulate matter with an aerodynamic diameter of 10 microns and less
$PM_{2.5}$ - particulate matter with an aerodynamic diameter of 2.5 microns and less
PPAA - Private Property Assessment Act
Program - Sage Grouse Habitat Conservation Program
PSD - Prevention of Significant Deterioration
SHPO - Montana State Historic Preservation Office
SOC - Species of Concern
SO_2 - sulfur dioxide
tpy – tons per year
U.S.C. - United States Code
VOC - volatile organic compound

Table III: Summary of Potential Impacts from the Signal Peak Air Quality Permit Application.

Potential Impact	Affected Resource and EA Section Reference	Severity[1], Extent[2], Duration[3], Frequency[4], Uniqueness and Fragility (U/F)	Probability[5] Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Significant (yes/no)
PM emission fugitive dust	III. AIR QUALITY	**S**-low: SPE identified the emission fugitive dust increases which would result due to additional haul road traffic. Negligible fugitive dust is also possible from the two small stoker stockpiles. **E**-small: New stockpiles are approximately 4 acres total. **D/F**- Impacts from the proposed action will continue throughout the duration of the mine life. **U/F**-Not unique or particularly fragile.	Probable	There would be a negligible increase in fugitive dust from the additional semi-truck traffic.	SPE is subject to air quality permit requirements to limit fugitive dust including implementation of a fugitive dust control plan for the entire mine site.	No
Loss of Ground Cover Species	IV.VEGETATION COVER, QUANTITY AND QUALITY:	**S-low:** The new stockpiles are a total of approximately 4 acres**.** **E-small:** New stockpiles are approximately 4 acres total. **D/F-** Impacts from the proposed action will continue throughout the duration of the mine life. **U/F-**Not unique or particularly fragile	Probable	The new stockpiles would cover any existing grasses and brush which are present.	None	No
Energy Use Increase Onsite and Transportation Energy Use Increases	X. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY	**S**-low: More semi truck loads of coal may be shipped. **E**-small: Minimal change is expected. **D/F**- Additional diesel fuel and water usage at SPE would be on-going for the duration of the facility life. **U/F**-Not unique or particularly fragile.	Probable	Additional fuel and water would be required.	Limited by allowed amount of coal shipped via semi-truck	No

Potential Impact	Affected Resource and EA Section Reference	Severity[1], Extent[2], Duration[3], Frequency[4], Uniqueness and Fragility (U/F)	Probability[5] Impact Would Occur	Cumulative Impacts	Proposed Measures to Reduce Impact (by applicant)	Significant (yes/no)
Property's Continued Use for Industrial Activities	XIII. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION	**S**-low: More semi truck loads of coal may be shipped. **E**-small: Minimal change is expected. **D/F**- Additional diesel fuel and water usage at SPE would be on-going for the duration of the facility life. **U/F**-Not unique or particularly fragile	Probable	Additional fuel and water would be required.	Limited by allowed amount of coal shipped via semi-truck	No
Tax Base and Employ-ment	XIV. QUANTITY AND DISTRIBUTION OF EMPLOYMENT XV. LOCAL AND STATE TAX BASE AND TAX REVENUES XIX. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING	**S** -low; Minor impacts are expected from the proposed action. **E** – Small: No new permanent employees are expected but contract employees for semi-trucks may occur **D/F** – Duration of the life of the mine **U/F**-Not unique or particularly fragile	Probable	No expected change.	None proposed.	No

Definitions are quantified as follows:

• Short-term: Short-term impacts are defined as those impacts that would not last longer than the proposed operation of the site.

• Long-term: Long-term impacts are defined as impacts that would remain or occur following shutdown of the proposed facility.

1. Severity describes the density at which the impact may occur. Levels used are low, medium, high.

The severity of an impact is measured using the following:

• No impact: There would be no change from current conditions.

• Negligible: An adverse or beneficial effect would occur but would be at the lowest levels of detection.

• Minor: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.

• Moderate: The effect would be easily identifiable and would change the function or integrity of the resource.

• Major: The effect would alter the resource.

2. Extent describes the land area over which the impact may occur. Levels used are small, medium, and large.
3. Duration describes the time period over which the impact may occur. Descriptors used are discrete time increments (day, month, year, and season).
4. Frequency describes how often the impact may occur.
5. Probability describes how likely it is that the impact may occur without mitigation. Levels used are: impossible, unlikely, possible, probable, certain