

WRITTEN FINDINGS

Prepared by:

Montana Department of Environmental Quality
Industrial and Energy Minerals Bureau
Coal Program

For

Major Revision TR3 for WDA2 and Expansion of WDA1

Bull Mountain Coal Mining Inc.
C1993017

Musselshell County

August 2017



D-000085

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I. INTRODUCTION

Surface Mining Permit C1993017 was originally issued to Meridian Minerals on October 15, 1993, transferred to Glacier Park Company on September 25, 1995, transferred to Mountain Inc., on November 20, 1995, and to BMP Investments, Inc. on July 2, 2002. BMP Investments Inc. (BMPII) was renamed Bull Mountain Coal Mining, Inc. on December 13, 2006 and the permit was transferred to Signal Peak Energy, LLC (SPE) on September 15, 2008. An Environmental Impact Statement titled Meridian Minerals Company, Bull Mountains Mine No. 1, Musselshell and Yellowstone Counties, Montana, November 1992, covered the mining activities planned at that time including the area known as life of mine (LOM). The area under consideration in this proposed Major Revision, was included in the LOM area addressed by the November 1992 Environmental Impact Statement (EIS).

The SPE underground mining operation produces byproducts in the form of waste rock and coal fines, which are unmarketable. This waste is currently disposed of as fill in an approved valley fill type waste disposal area designated WDA1. The WDA1 disposal area is expected to reach capacity in the next 2 years after which the site is to be reclaimed. SPE is proposing construction of an additional coal waste disposal area (WDA2) and increasing the capacity of WDA1. The application proposes to increase the existing life of mine disturbance including WDA1 and the facilities from 819 acres to approximately 1,239 acres. The 420 acre increase in disturbance is within the existing 14,896 acre mine property and above lands previously mined. The new site is adjacent to, but across Fattig Creek Road from the existing WDA1 site. The additional WDA2 site and increase in capacity to WDA1 is expected to provide waste storage for an additional ten to fifteen years of mine production.

Waste material would be spread on the WDAs in maximum 2-foot lifts and compacted to 90 percent dry density (90 percent of maximum density at optimal moisture conditions). Topsoil would be re-spread and the surface revegetated when final elevations are reached. Diversion channels and sedimentation ponds would contain runoff from the WDAs while under construction and until permanent vegetation is re-established. There would be little or no potential for discharge of soluble or suspended waste constituents during construction or after completion of the WDAs. The construction and operation of WDA2 and the expansion of WDA1 will not be a change in the method of operation that was analyzed in the 1992 EIS referenced above. The disturbed lands will be reclaimed and returned to grazing use when no longer needed for mining operations.

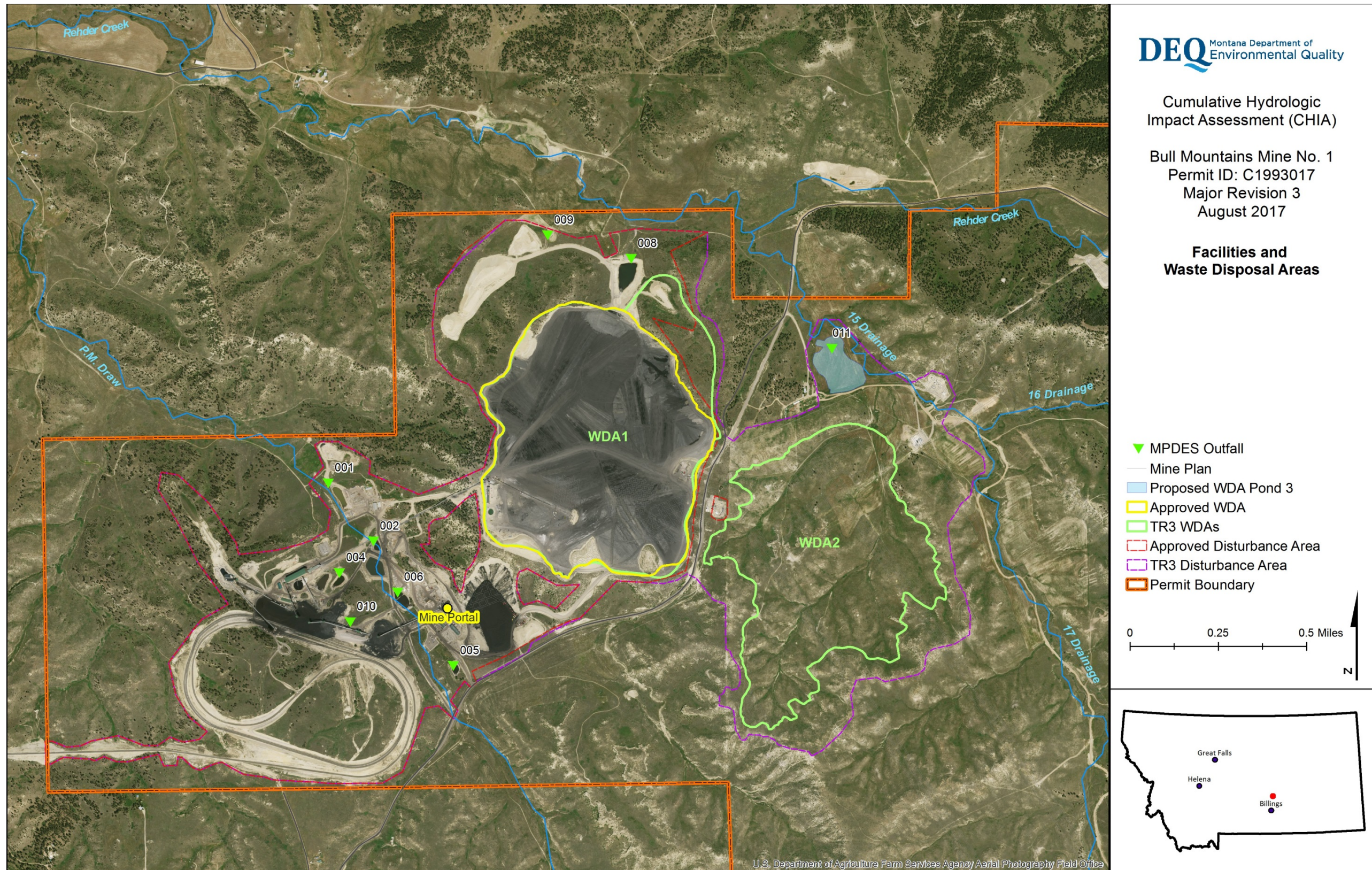


Figure 1: Facilities and Waste Disposal Areas

Table I -- Introductory Table

Applicant	Signal Peak Energy, LLC (SPE)
Name of Mine	Bull Mountains Mine No.1
Surface Mine Permit Number.....	C1993017
MSHA Number	2401950
Type of Mine.....	Underground
Type of Application	Major Revision
Application number.....	TR3
Area within existing permit boundary (acres)	14,896
Proposed Increase in Permit Area (Acres).....	0
Total proposed permit area (acres)	14,896
Anticipated Annual Production	Up to 11,000,000 tons
Reclamation Bond Amount.....	\$15,700,000

Table II - Chronology of Events

Permit Chronology

July 2, 2002	Permit transferred to BMP Investments Inc. pursuant to § 82-4-250, MCA.
May 9, 2003	5-Year Renewal of SMP 93017: Permitted acreage remains the same.
August 24, 2006	Total change of Ownership and Control resulted in transfer of the permit to the new owners. The name of the permittee and acreage within the permit remain the same.
December 13, 2006	Name change for the company was registered with the Montana Secretary of State. The new name for the company is Bull Mountain Coal Mining, Inc.
January 16, 2007	Application 00178 (Amendment 1) adding 2,172 acres for underground mining level disturbance and related subsidence, as well as ancillary disturbance within the new permit boundary was approved.
May 9, 2008	5-Year Renewal of SMP C1993017: Permitted acreage remains the same.
September 15, 2008	Permit was transferred to SPE.
August 3, 2011	Amendment 2 (Application 00187) for an additional 1,193 acres was received.
October 4, 2012	Amendment 2, Permit Issued – Reclamation bond required \$10,860,511; amount of reclamation bond held \$11,700,000.
October 18, 2013	Amendment 3, Increase in Permit Area Approved.

July 2, 2016 Amendment 3, Increase in Permit Area approved after BER decision.

Application Chronology

August 18, 2014 Major Revision application received for TR2 – Waste Disposal Area No. 2.

November 6, 2014 DEQ sends first round completeness deficiency letter.

November 24, 2014 DEQ receives first round completeness response.

February 23, 2015 DEQ determines the application complete.

April 10, 2015 DEQ received affidavit of public notice stating that the application was noticed four consecutive weeks from March 4, 2015 through March 25, 2015 in the Roundup Record Tribune.

April 23, 2015 Comment received from Ellen Pfister regarding the application.

June 17, 2015 DEQ sends Signal Peak the first Round Acceptability Deficiency.

August 3, 2015 DEQ receives Signal Peak’s deficiency response.

August 24, 2015 DEQ notifies Signal Peak that they have made a significant change to the application, the application will have to be ruled complete again and the application will now be numbered TR3.

August 27, 2015 DEQ determines TR3 to be complete.

September 4, 2015 DEQ sends notice of application.

September 10, 2015 DEQ receives comments from the Army Corp of Engineers

September 11, 2015 DEQ receives a copy of the request for WoUS evaluation for Coal Waste Disposal Area 2 from Signal Peak Energy to the Army Corp of Engineers.

October 12, 2015 DEQ received affidavit of publication from Signal Peak stating the application had been published four consecutive weeks September 2, 2015 to September 23, 2015 in the Roundup Record-Tribune.

October 29, 2015 DEQ receives public comments.

November 13, 2015 DEQ sends Signal Peak the first round acceptability deficiency.

December 3, 2015	DEQ received the WDA2 Army Corps Jurisdictional Determination for TR3.
July 6, 2016	DEQ receives Signal Peak's response to the first round deficiency.
October 25, 2016	DEQ sends Signal Peak the second round acceptability deficiency.
December 23, 2016	DEQ received Signal Peak second round deficiency response.
February 16, 2017	DEQ sends Signal Peak the third round deficiency letter.
March 6, 2017	DEQ receives the third round deficiency response.
May 25, 2017	Public Hearing held at the Roundup City Office for the disturbance within 100 feet of Fattig Creek Road.
June 16, 2017	Written Findings prepared for the disturbance within 100 feet of Fattig Creek Road.
July 3, 2017	Acceptability Determination and Draft EA are issued.
August 1, 2017	SPE submitted a bond rider for \$4,000,000. The total reclamation bond currently totals \$15,700,000.

II. EVALUATION OF COMPLIANCE

A. Coal Reserves and Coal Conservation

SPE proposes to add a waste disposal area (WDA) and expand the existing waste disposal area to include approximately 420 acres of surface disturbance within the existing permit boundary of the Bull Mountains Mine No. 1, south of Roundup, Montana. TR3 does not add any coal reserves to the existing permit area.

Coal at Bull Mountains Mine No. 1 is recovered using mechanical underground mining methods, including continuous mining ("room and pillar") and longwall mining. Subsidence is planned to occur over the mined-out area.

Longwall mining is a method by which all of the coal is completely removed from each longwall panel, effectively achieving 100% coal extraction. The complete extraction of the coal in each longwall panel results in subsidence. The surface above the mine maintains the premine configuration at a somewhat lower elevation throughout the mined area. Subsidence is often expressed by new features in the surface (e.g. cracks, rock falls/slides, and uneven areas). At full production, SPE is planning on mining longwall panels at a rate of 11,000,000 tons/year. This number equates to the longwall face advancing roughly 55 ft/day.

B. Overburden, Soils and Engineering

Overburden and Soils

The proposed major revision to Bull Mountains Mine No. 1 is for the expansion of the existing waste disposal area (WDA) and the development of a second waste disposal area. Soil will be salvaged from the footprint of the Waste Disposal Areas in two lifts. Lift thickness is designated by soil type in the baseline soil survey using the following ranges; Lift 1 (0.25 to 1.5 feet), Lift 2 (.25 to 3.0 feet).

An additional lift (Lift 3) of suitable parent material or weathered rock will also be salvaged to meet cover requirements. Lift 3 would range from .25 to 10 feet thick depending on hardness of rock material. Material volumes are closely managed and reported to DEQ annually to ensure there is adequate material to meet cover requirements discussed below.

Cover material for the WDAs is required to be at least four feet thick because it is covering coal processing waste. The coal processing waste will be sampled twice to determine acid or acid forming potential and toxicity or toxicity potential. Once during the startup of the processing plant prior to placement of coal and a second time prior to the placement of final cover material. Although no materials have been identified as acid, acid forming, toxic, or toxic forming, in the event the material is determined acid, acid forming, toxic, or toxic forming an 8 foot layer of suitable cover will be required. If material is determined to need 8 feet of cover the material balance will be recalculated. Signal Peak Energy will need to acquire additional cover material if the balance is short.

All soil lifts will be segregated and stockpiled separately. Lift 2 and 3 materials may be stockpiled together if Lift 3 materials are consistent with DEQ guidelines for soil and soil particle size. Where rock is the major component of Lift 3 materials, salvaged material will be stockpiled separately. When there is enough surface area on the waste fill material to meet the postmine topography for the WDA2, reclamation will begin.

The suitable cover material will be applied in reverse order. This means the Lift 3 materials will be applied first followed by Lift 2 then Lift 1 topsoil to meet the cover requirement. This material cap will be contoured and compacted to shed water from the waste fill zone minimizing infiltration. With this compacted contoured design and low water budget of the region, water is not expected to reach the waste material in adequate volumes to create leaching issue. Once the soil is in place the area will be seeded with the approved seed mix.

Engineering

The SPE underground mining and coal processing operations produce byproducts in the form of waste rock and coal fines, which are unmarketable. This waste is currently disposed of as fill in an approved valley fill type waste disposal area designated WDA1. The WDA1 disposal area is expected to reach capacity in the next 2 years after which the site is to be reclaimed. SPE is

proposing construction of an additional coal waste disposal area (WDA2) and an increase in capacity to WDA1. The application proposes to increase the existing life of mine disturbance including WDA1 and the facilities from 819 acres to approximately 1,239 acres. The 420 acre increase in disturbance is within the existing 14,896 acre mine property and above lands previously mined. The new site is adjacent to, but across Fattig Creek Road from the existing WDA1 site. The additional WDA2 site and increase in capacity to WDA1 is expected to provide waste storage for an additional ten to fifteen years of mine production.

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C. Vegetation

Vegetative communities would not be significantly impacted with the expansion of WDA 1 and the addition of WDA 2. The baseline surveys of the area proposed to be disturbed do not show any rare plants or community types. SPE will salvage adequate amounts of soil for soil replacement once the WDAs are completed. This will then be seeded with the approved seed mix, comprised of a variety of native plant species and limited introduced species and pre-mine vegetation communities will be replaced. SPE is currently reclaiming crib pads and surface subsidence features using their approved reclamation plan and these areas are showing successful establishment. As the current reclamation plan is being adopted for the second WDA, any potential issues identified during closure of WDA 1 could be amended in the WDA 2 reclamation.

D. Wildlife/Livestock

There are no critical terrestrial, avian, or aquatic habitats in the vicinity of WDA1 or WDA2. Although wildlife and livestock use will be limited during the operation of the WDAs, once reclamation is complete, the area will be reclaimed back to its current use of grazing wildlife habitat.

E. Hydrology

The main hydrologic issues surrounding the Bull Mountains Mine No. 1 are the potential for loss or diminution of the quantity and quality of groundwater and surface water, and the resulting impacts to wells, springs, ponds, and stream reaches within and in the vicinity of the mined area. These potential impacts are described below.

Surface Water

Surface water runoff in the facilities area and WDAs is controlled through a series of ponds and diversion structures and regulated through DEQ's MPDES program. Discharges to surface waters are very infrequent. During operation of the WDAs surface water runoff from the affected areas are impounded, resulting in a net reduction in surface water runoff. Due to the small area of the Rehder Creek watershed affected, this reduction in runoff is insignificant to the hydrologic balance. After the WDA fills have reached final elevation and are graded, they will be covered with a minimum of 4 feet of the best available non-toxic and non-combustible material, including subsoil and topsoil as described in the Reclamation Plan. When reclamation is complete, surface water runoff from the reclaimed WDAs should be approximately equivalent to premining conditions. No impacts to surface water quality during or after operations are anticipated.

Groundwater

Placement and compaction of waste material in the WDAs will reduce vertical recharge in the areas covered by the WDA footprints. Water quantity may be slightly affected due to this reduction in infiltration, however these changes are expected to be insignificant to the hydrologic balance because the WDAs are not located in a significant recharge area and the natural geologic strata also have low permeability. There is potential for impacts to the Rehder Creek alluvial groundwater quality and shallow bedrock due to precipitation runoff and infiltration from the WDAs. However, these impacts are limited by compaction to engineering standards of materials placed in the WDAs and detention of storm water runoff in sediment ponds. Storage of water in sediment ponds adjacent to alluvium can result in increased infiltration to the alluvial groundwater which can increase alluvial water levels and potentially affect groundwater quality. If changes in water quality due to infiltration of water from sediment ponds occur, they are more likely than not to be within the range of natural alluvial groundwater quality variations and have no adverse effects on the hydrologic balance or the beneficial uses of the water. SPE maintains alluvial groundwater monitoring wells adjacent to the sediment pond locations for WDA1 and WDA2.

Monitoring data would be used to detect any changes in alluvial groundwater quality and modify management of water in the sediment ponds to minimize the potential impacts.

F. Cultural and Historic Resources

This revision includes additional surface disturbance within Township 6 North, Range 27 East, Section 7, 18, and 19. The proposed major revision would result in no adverse effect upon the known cultural, archeological, and paleontological resources.

G. Bonding

Bonding costs were updated to account for the increase of disturbance associated with WDA2. All line items in the bond were reviewed and adjusted as needed, using current cost data. In addition, the format of the bond was changed. Format changes were needed for conformity with

other coal mine permits and clarity. The bond amount increased \$4,395,119 from \$11,249,609 to \$15,644,728. On August 1, 2017, SPE submitted a bond rider in the amount of \$4,000,000, resulting in a total reclamation bond amount of \$15,700,000.

III. FINDINGS

- A. DEQ has determined that the Bull Mountains Mine revision TR3, received August 3, 2015, and revised through March 6, 2017, is complete and accurate, and the applicant has complied with the applicable regulatory requirements and the administrative rules adopted pursuant thereto[§ 82-4-222, MCA].
- B. The applicant has demonstrated that reclamation, as required by the Montana Strip and Underground Mine Reclamation Act and regulations, can be accomplished under the proposed reclamation plan and will be carried out consistently with the applicable statutes and rules adopted pursuant thereto. [§ 82-4-227(1), MCA].
- C. DEQ has determined the proposed major revision to the Bull Mountains Mine Plan area is:
 - 1. Not within an area under study or administrative proceedings under a petition to have an area designated as unsuitable for strip or underground coal mining operations [§ 82-4-227(9), MCA].
 - 2. Not included in an area designated unsuitable for strip or underground coal mining operations [§ 82-4-227(9), MCA].
 - 3. Not on any lands subject to the prohibitions or limitations of § 82-4-227, MCA, to include national parks, refuges, forests, etc.; nor where adverse impacts to publicly owned parks or places included in the National Register of Historic Places, and buildings, occupied dwellings, and cemeteries would occur.
 - 4. The application proposes disturbance within 100 feet, horizontally, of the outside right-of-way line of a public road (Installing a conveyor across Fattig Creek Road), therefore, ARM 17.24.1134 applies to this permitting action. A public meeting was held on May 25, 2017, and associated written findings were prepared on June 16, 2017. There was no public testimony or comments received for this action.
 - 5. Not mining within 300 feet, horizontally, of any public building, church, school, community or institutional building, or public park.
 - 6. Not mining within 100 feet, horizontally, of a cemetery where human bodies are interred.
- D. SPE has obtained all surface and mineral rights to conduct mining and reclamation operations in the proposed amendment area.
- E. DEQ has made an assessment of the probable cumulative impacts of all anticipated coal mining on the hydrologic balance of the cumulative impact area. See Appendix 1 for detailed assessments.

DEQ has determined that this proposed mine plan revision would not result in material damage to the hydrologic balance outside the permit area.

- F. The application does not propose disturbance within 300 feet of any occupied dwelling (see 82-4-227(7)(a), MCA);.
- G. SPE has paid all reclamation fees from previous and existing operations as required by 30 CFR Chapter VII, Subchapter R, according to information obtained by DEQ from the Applicant Violator System (AVS) on August 8, 2017.
- H. No special categories of mining are applicable to the proposed amendment.
- I. There is no proposal for an intensive agricultural post-mining land use within the amendment/revision area.
- J. The proposed amendment/revision would not affect the continued existence of threatened or endangered species or result in the destruction or adverse modification of their critical habitats, as determined under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).
- K. There are no known private family burial grounds that the operation will cause a hazard to within the amendment/revision area [§ 82-4-227(7), MCA].
- L. SPE has obtained all required air quality and water quality permits.
- M. SPE has had four violations since 2012 at the Bull Mountain Mine No.1 that have been addressed and are now closed. Bull Mountain Mine No.1 is not currently in violation of any federal environmental laws that would prohibit issuance of the amended permit.

On March 8, 2012, DEQ issued a Notice of Non-Compliance and Order of Abatement (Order of Abatement) to SPE for drilling boreholes without prior approval from DEQ, which violated the rules adopted pursuant to the Montana Strip and Underground Reclamation Act (MSUMRA). On February 9 and 20, 2011, boreholes 37 through 43 had been drilled without approval by DEQ. Additionally, roads and drill pads had been developed to access and operate each borehole and roads were developed in the bottom of dry coulees which altered the natural drainage ways. The Order of Abatement required that SPE conduct operations as described in its mining permit until a mine plan revision was approved by DEQ. On May 29, 2012, DEQ issued a Termination of Abatement Order upon receipt and approval of Minor Revision 137 (MR 137). MR 137 addressed the disturbance associated with boreholes 37-49. MR 137 was approved by DEQ on May 25, 2012. On June 21, 2012, DEQ issued a Notice of Violation and Administrative Penalty Order to SPE which included a penalty of \$47,925. On July 19, 2012, SPE requested a hearing before the Board to contest the violation and penalty; this request was later withdrawn. On January 15, 2013, DEQ issued a Release from Civil Liability to SPE, which acknowledged receipt of a \$26,537.50 civil penalty settlement and resulted in the closing of the case file.

On May 14, 2012, DEQ issued a Notice of Non-Compliance and Order of Abatement (Order of Abatement) to SPE for failure to comply with the approved monitoring plan, which violated the rules adopted pursuant to MSUMRA. On April 9, 2012, the following practice or condition was observed: After review of the 2011 Annual Hydrology Report DEQ identified that the Permittee's ground water and surface water monitoring practices materially deviated from the approved water monitoring plan. The Order of Abatement required that SPE conduct operations as described in its mining permit until a mine plan revision was approved by DEQ. To abate the violation, SPE was ordered to submit a revised ground water and surface water monitoring plan for inclusion in the permit. On August 24, 2012, DEQ issued a Termination of Abatement Order upon receipt and acceptance of a revised monitoring plan. On September 13, 2012, DEQ issued a Notice of Violation and Administrative Penalty Order to SPE which included a penalty of \$5,900. On November 1, 2012, DEQ issued a Release from Civil Liability to SPE, which acknowledged receipt of the \$5,900 civil penalty and resulted in the closing of the case file.

On July 9, 2013, DEQ issued a Notice of Non-Compliance and Order of Abatement (Order of Abatement) to SPE for a violation of the rules adopted pursuant to MSUMRA, which required that SPE obtain DEQ approval prior to implementing a permit revision. On June 13, 2013, the permittee was observed constructing the Recovery Room Pad associated with MR 169 prior to obtaining DEQ approval. Prior to this observation, the permittee was notified that MR 169 would be approved pending the receipt of updated permit materials. At the time of the observation, DEQ had neither received the updated permit materials nor approved MR 169. To abate the violation, SPE was ordered to submit the updated permit materials required for approval of MR 169, as well as revise the internal "Management Pre-Disturbance Sign Off Form." On July 24, 2013, DEQ issued a Termination of Abatement Order upon receipt of the updated permit materials and Management Sign Off form. On August 29, 2013, DEQ issued an Administrative Order on Consent with a proposed penalty of \$3,500. SPE negotiated a lower penalty settlement of \$3,000 with DEQ. SPE submitted a penalty payment of \$3,000 on October 4, 2013, thereby satisfying the order.

On April 15, 2014, DEQ issued a Notice of Non-Compliance and Order of Abatement (Order of Abatement) to SPE for failure to comply with the approved monitoring plan, which violated the rules adopted pursuant to MSUMRA. On March 24, 2014, after reviewing the 2013 Annual Hydrology Report, DEQ identified that SPE ground water and surface water monitoring practices materially deviated from the approved water monitoring plan. On May 1, 2014, DEQ issued a Termination of Abatement after SPE had submitted a response describing actions taken to assure compliance with the approved Monitoring and Quality Assurance Plan. DEQ issued an Administrative Order on Consent with a proposed penalty of \$46,075. SPE negotiated a lower settlement of \$36,475 with DEQ. SPE submitted a penalty payment of \$36,475 on October 8, 2015, thereby satisfying the order.

The United States Environmental Protection Agency ("EPA") maintains a publically-accessible online database entitled Enforcement and Compliance History Online ("ECHO"), located at <http://echo.epa.gov>. ECHO provides a summary of permit compliance history for facilities and communities. For a specific facility, the most recent 13 quarters are summarized by ECHO for select permits.

DEQ recently performed a search of the ECHO database, which indicated that Signal Peak Energy (“SPE”) Bull Mountains Mine No. 1 has resolved all of the Clean Water Act (“CWA”) permit violations that it had during the last 12 quarters. SPE’s last permit violation was resolved on October 15, 2015. These violations are the result of 4 separate events. Three of these are listed as non-RNC violations (i.e. minor) in ECHO. The fourth event occurred in June 2015 and was resolved in October 2015. All of SPE’s CWA permit violations have been corrected to the satisfaction of the regulatory agency, DEQ.

- N. No strip or underground coal mining and reclamation operations owned or controlled by SPE or related entities currently has a violation of Public Law 95-87, as amended, any state law required by Public Law 95-87, as amended, or any law, rule or regulation in the United States pertaining to air or water environmental protection that has not been or is not in the process of being resolved [82-4-227(11), MCA], (AVS check on August 8, 2016).
- O. DEQ’s records show that the applicant does not control and has not controlled strip or underground coal mining and reclamation operations with a demonstrated pattern of willful violations of Public Law 95-87, as amended, or any state law required by Public Law 95-87, as amended, of such nature, duration, and with such resulting irreparable damage to the environment that would indicate an intent not to comply with these laws [82-4-227(12), MCA] (AVS check on August 8, 2017).
- P. SPE is in compliance with all applicable federal and state cultural resource requirements, including ARM 17.24.318, 1131, and 1137.
- Q. No re-mining is included in TR3.

IV. STIPULATIONS

ARM 17.24.304(1)(b) requires permit applicants to include a listing, location and description of all archeological, historical, ethnological and cultural resources and values of the proposed mine plan and adjacent area. Protection of any incidentally discovered sites is stipulated in the approved surface mining permit.

V. PRIVATE PROPERTY TAKINGS

The 1995 Montana legislature passed House Bill (HB) 311, which requires a state agency to prepare an impact assessment of a proposed agency action that has private property takings or damaging implications. See §§ 2-10-101, et seq., MCA, the Private Property Assessment Act. Section 2-10-105, MCA, states that the assessment must include the following:

"(a) the likelihood that a state or federal court would hold that the action is a taking or damaging;

"(b) alternatives to the action that would fulfill the agency's statutory obligations and at the same time reduce the risk for a taking or damaging; and

"(c) the estimated cost of any financial compensation by the state agency to one or more persons that might be caused by the action and the source for payment of the compensation."

Part (3) of § 2-10-105 states:

"A copy of the impact assessment for a proposed action with taking or damaging implications must be given to the governor before the action is taken, except that an action to avoid an immediate threat to public health and safety may be taken before the impact assessment is completed and the assessment may be reported to the governor after the action is taken."

Pursuant to § 2-10-104(1), the state Attorney General has developed guidelines for agency use in evaluating agency actions with respect to the above requirements. Accordingly, DEQ prepared the responses contained in the attached checklist (See Appendix II), as they relate to the proposed mine permit amendment. A review of the attached checklist indicates that DEQ is not required to prepare a private property takings impact assessment.

VI. DECISION

Based on the information found in SPE's TR3 major revision application and these findings, DEQ hereby approves the TR3 application as revised through March 6, 2017.

VII. RESPONSE TO PUBLIC COMMENT

1. Under the authority of Section 404 of the Clean Water Act, Department of Army permits are required for the discharge of fill material into waters of the U.S. The Corps recommended that the Applicant contact them to coordinate an initial review of their proposal.

Signal Peak requested the review on September 11, 2015.

2. Subsidence. This revision does not include any new underground mining, thus no change to subsidence issues should occur.

3. Where were the excavations located that had only 3 or 4 feet of cover over bed rock versus a few that had up to 20 feet of cover over bedrock?

Typically a landscape will demonstrate thinner coverage of surface materials on slopes and hilltops and thicker coverage in valley bottoms and swales where weathered material can accumulate. These are all parts of the erosion and deposition process. Where the earth's surface is exposed to weather and gravity the bedrock breaks down and is

transported away resulting in thin covers of material over the bedrock. At the other end of the spectrum areas protected from weather typically on lower gradients and sheltered from prevailing weather will accumulate material leaving a thick surface layer. Excavations located on slopes and hilltops will show thinner materials than the ones located in low gradient flatter or protected areas.

4. Concern that WDA2 will put quite a cork in the 17 drainage (Straight Coulee). Additionally, the comment was concerned with keeping WDA Pond #3 out of the main drainage.

The main WDA2 fill is located in a side tributary of the 15 drainage below the confluence of the 16 and 17 drainages thus is not expected to impede either surface water flow in the 17 drainage (or 15 drainage) or groundwater flow in the 17 drainage (or 15 drainage) alluvium. SPE conducted a flood height analysis for a 100-year flood in the 15 drainage adjacent to WDA2 and WDA Pond 3. This analysis demonstrated that the 100-year flood flow would not enter or be impeded by WDA Pond 3. The boundaries of WDA Subsoil Stockpile #4 were designed to keep the stockpile footprint outside of the 100-year floodplain. As demonstrated by monitoring wells BMP020 and BMP049, the alluvium in the 15 drainage is typically dry and only becomes partially saturated temporarily during wet years. Placement of soil stockpiles on top of the alluvium and the excavation of WDA Pond 3 are not expected to disrupt these periodic groundwater flows.

5. How will the bald headed hills on both WDA's sustain grazing due to lack of trees and shrubs to hold moisture?

A large portion of the current permit area sustains grazing on the same substrate as the WDA material without trees. The species included in the grazing land seed mixes have been chosen as these plants were the dominant components of the baseline communities. These species are native to this area and therefore adapted to the moisture regime of the Bull Mountains and surrounding areas. Though conifers and shrubs are also native to the area, they are not required for these grass species to thrive. Shrubs are included in the reclamation plan for the steeper slopes of the WDA's and included in seed mix 313-3D Shrub-Grassland Seed Mix. As both shrubs and trees are present adjacent to the WDA's it can be expected that they will establish on the reclaimed WDA's when moisture and soil conditions are optimal. This has been seen in other reclamation areas and is a reasonable expectation for this area also.

6. How will water be supplied to these areas to support grazing?

A stock water well is located at the Johnson House, just north of the proposed WDA2, which provides a source of water for grazing cattle in this area.

7. What happens to wells that have been finished in gate road pillars, when the gate road pillars collapse? Does the well survive undamaged or can it lose part of the well hole depending on what happens?

The action under consideration is related to construction of the WDA and not directly to mining. However, shallow wells which are above the mining zone are typically left alone to see how they fare after subsidence. Deeper wells which penetrate the coal to be mined are reclaimed and sealed in advance of underground mining. In all cases, the mine is required by permit commitments to replace or mitigate lost wells and water sources. There are no deep wells within the planned location of the gate road pillars, but would be subject to mitigation if there were.

8. Where will SPE get fly ash for their activities since the Corette Plant is decommissioned?

A review of SPE's Annual Reports submitted to the Solid Water Program indicated that SPE had not used any fly ash from the Corette Plant since 2010. In 2016 all the fly ash used by SPE was acquired from the Yellowstone Energy Limited Partnership Plan in Billing, MT.