

WRITTEN FINDINGS

Prepared by:

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

For

Amendment and Mine Plan Revision

Bull Mountain Coal Mining Inc.
C1993017

Musselshell and Yellowstone Counties

July 2016



D-000050

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I. INTRODUCTION

Signal Peak Energy, LLC (SPE), formerly Bull Mountain Coal Mining, Inc. (BMCM) and Bull Mountain Property Investments, Inc. (BMPII), has applied to the Montana Department of Environmental Quality (DEQ) for an amendment (AM3) to its current mining permit at the Bull Mountains Mine No. 1 (Figure 1), SMP C1993017. The proposed permit amendment would add 7,161 acres to the permit area, expand the underground mine plan and add approximately 176 million tons of coal to the permitted life-of-mine (LOM) reserves. Approximately 20 acres of additional surface disturbance is expected as a result of this Amendment. This amount of additional disturbance is necessary to construct temporary surface facilities that support underground mining. Temporary surface support facilities include boreholes, service pads, power lines, and roads.

This application was originally approved on October 18, 2013. However, the Montana Environmental Information Center (MEIC) appealed DEQ's decision to issue the amended permit to the Board of Environmental Review (Board). On January 11, 2016, Signal Peak Energy, LLC, MEIC and the Montana Department of Environmental Quality (DEQ) entered a Consent Decree and Order (Order) before the Board. Pursuant to the Order, DEQ had an additional 180 days from the date of the final order, to revise the Cumulative Hydrologic Impact Assessment (CHIA), and to issue new written findings in support of DEQ's decision to approve or deny the AM3 permit amendment application.

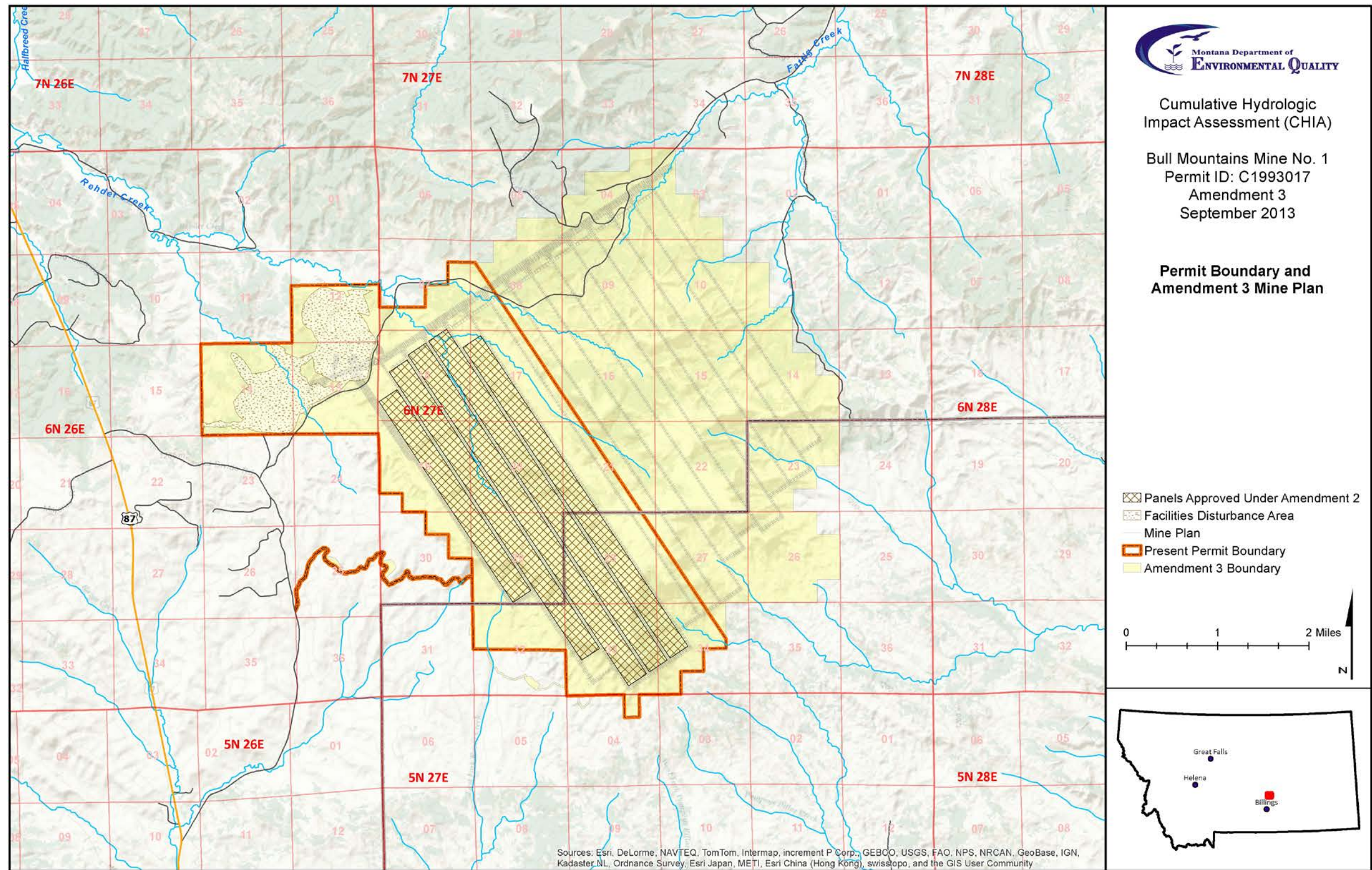


Figure 1: Permit Boundary and AM3 Mine Plan

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	Amendment
Application number.....	03
Area within existing permit boundary (acres).....	7,735
Proposed Increase in Permit Area (Acres).....	7,161
Total proposed permit area (acres)	14,896
Anticipated Annual Production	Up to 11,000,000 tons
Reclamation Bond Amount.....	\$11,700,000

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.

Application Chronology

October, 5, 2012	Amendment 3 Application for an additional 7,161.4 acres was received.
December 14, 2012	DEQ declared Amendment 3 (AM3) complete. Applicant could begin public notice.
December 19, 2012	DEQ mails Notice of Application to pertinent state, local and federal agencies.
January 2, 9, 16, 23	Notice of Application was published in the Billings Gazette and Roundup Record Tribune.
January 07 through February 27, 2013	DEQ received written comments.
March 01, 2013	DEQ sent first technical deficiency letter to SPE.
March 19, 2013	DEQ received SPE's first round technical deficiency response.
June 14, 2013	DEQ sent second technical deficiency letter to SPE.
July 01, 2013	DEQ received SPE's second round technical deficiency response.
August 02, 2013	DEQ sent third round technical deficiency letter to SPE.
August 19, 2013	DEQ received third round technical deficiency response.
September 03, 2013	DEQ declared AM3 to be technically acceptable.
September 03, 2013	Requests to the Billings Gazette and Roundup Record Tribune to publish the notice of acceptability and availability of the EA.
September 12 and 19, 2013	Notice of Acceptability and availability of the Draft EA are published in the Billings Gazette.
September 23, 2013	DEQ received receipt of affidavit for notice of application from the Billings Gazette.
September 27, 2013	DEQ received requests for extension to public comment period and granted extension. Comment period extended to October 7, 2013.
October 7, 2013	Public comment period ended.

October 18, 2013	Permit Issued – Reclamation bond required \$11,194,411; amount of reclamation bond held \$11,700,000.
November 18, 2013	WELC submitted a Notice of Appeal and Request for Hearing to the Board.
November 20, 2013	DEQ was served a copy of the Notice of Appeal and Request for Hearing from the Board.
December 19, 2013	DEQ filed a waiver of the 30-day hearing requirement.
February 27, 2014	DEQ responds to WELC and MEIC’s first and second discovery requests.
April 11, 2014	DEQ received a copy of Appellant’s Brief in Support of Motion for Summary Judgment.
August 25, 2014	DEQ received a copy of the Appellant’s reply brief in Support of Motion for Summary Judgment
December 8, 2015	DEQ sends SPE a fifth round acceptability deficiency.
January 11, 2016	MEIC, DEQ and SPE enter into a consent Decree and Order.
January 14, 2016	Board issues Findings of Fact, Conclusions of Law, and Order.
January 20, 2016	SPE submitted a response to the fifth round acceptability deficiency.
January 29, 2016	DEQ sends SPE a follow-up acceptability deficiency.
February 11, 2016	SPE responds to the follow-up deficiency.
February 26, 2016	DEQ sends SPE a sixth round acceptability deficiency.
March 4, 2016	SPE responds to the sixth round acceptability deficiency.
May 5, 2016	SPE submits an updated Appendix 314-5 to the PHC.
May 24, 2016	DEQ determines the application to be acceptable and begins the public notification process.
May 25 and June 1, 2016	Notice of Acceptability published in the Roundup Record-Tribune and Billings Gazette.
June 10, 2016	DEQ received comment from Wendy Beye, Roundup, MT.

June 13, 2016 DEQ received comments from MEIC.

June 13, 2016 Public comment period ended.

June 15, 2016 DEQ received comments from Musselshell County Road Department.

June 21, 2016 DEQ received comment from Fergus Electric

II. EVALUATION OF COMPLIANCE

A. Coal Reserves and Coal Conservation

SPE proposes to amend approximately 7,161 acres to the permit area of the Bull Mountains Mine No. 1, south of Roundup, Montana. AM3 would add about 176 million tons of in-place coal reserves to the existing permit area, for a total of approximately 287 million tons of in-place coal. All extracted coal would be from the Mammoth Coal Seam.

Coal at Bull Mountains Mine No. 1 would be 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 amendment to Bull Mountains Mine No. 1 is for the expansion of underground mining; therefore, the soil resource would remain relatively undisturbed. Soils included in the area covered by the proposed amendment are going to remain in place; however, the mine would pass under the surface with a longwall operation which is expected to create subsidence on the surface. The result would be undulations in the topography and the surface may sustain some cracking. Mechanical treatment of subsidence may be more degrading to the soils than leaving them to repair in situ. Since soil profiles would remain mostly intact, the chemical and physical characteristics should remain the same. Repair and/or mitigation of surface subsidence would be evaluated on a site-specific basis. Soil salvage, regrading, soil replacement and seeding may be needed to restore the surface configuration necessary to maintain stream profiles, minimize erosion, and ensure the premine land use is maintained.

Engineering

Longwall panels at the Bull Mountains Mine consist of a block of coal, approximately 1,250 feet wide by 15,000 to 23,300 feet long. Panels would be completely extracted, resulting in caving in these areas. As subsequent rock strata above the mine cave in, the disturbance eventually would propagate to the surface in the form of subsidence, or surface depression. The mined-out areas cave in behind the longwall system as it advances along the length of the panel. Collapse of the roof over the longwall panel would cause the surface overlying the panel to subside by an amount somewhat less than the thickness of the coal seam. Subsidence in the Bull Mountains has been predicted to be and field verified to be about 70% of the extraction thickness. The Mammoth Coal ranges in thickness from 8 to 11 feet in the permit area. Subsidence is expected to range up to approximately 5-8 feet.

Surface cracking is expected in some areas. Minor damage to roads and fences is possible. Steep slopes in the area may be prone to rockslides during and for a time following subsidence. Landowners must be provided with a schedule at least 6 months prior to their property being undermined. The schedule must contain enough information to enable landowners to move cattle to safe areas and to avoid hazardous areas while mining is taking place.

C. Vegetation

As mining activities within the proposed amendment area would be underground, there would be little direct impact to the vegetative communities. There is expected to be drill pads, roads, and subsidence disturbance. Areas needing repair would have the soil salvaged from the site, as necessary, the site repaired/regraded, soil replaced, and the affected area seeded with an approved seed mix. As the proposed mining method would result in large panels subsiding as a unit, it is anticipated that this type of subsidence would have minimal effect on deep rooted plant species, such as ponderosa pine. However, some trees may be damaged, especially if they are located on a slough or subsidence crack.

D. Wildlife/Livestock

Numerous springs are located within the proposed amendment area. These springs are important to grazing livestock and to the local wildlife community. Water provided by these springs helps ensure livestock distribution throughout the grazing pastures and allows for overall grazing of the area, increasing the economic return to the land owner. A variety of wildlife species, including small mammals, bats, song birds, shorebirds, upland game birds, raptors, big game, and warm-water aquatic species utilize the springs and associated areas of ponded water.

Aquatic plants (periphyton), macroinvertebrates (e.g. earthworms, insects etc.) and vertebrates (e.g. tiger salamanders, painted turtles) are associated with springs and ponds (304(1) j-27). Fish have not been found in any of the ponds or stream reaches. Currently, there is no evidence that mining has impacted aquatic or other wildlife (e.g. birds, deer, coyotes etc.) that depend on these

water supplies.

No threatened or endangered aquatic species or habitat has been identified in the area.

Subsidence related fractures associated with the Fractured Zone may intercept and direct shallow groundwater into the Caved Zone which may alter spring discharge and ultimately land use.

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 and would be expected to be the same impacts that may occur if mining is expanded under AM3.

Surface Water

Potential impacts to surface waters are generally confined to those impacts resulting from land subsidence, facilities area and WDA disturbance, peripheral infrastructure and facilities (permit lands not including the main facilities and WDAs)

Surface streamflow in the area is ephemeral and driven by storm events and extended periods of wet weather that act to recharge perched aquifers. Perched aquifers, in turn, supply spring flow and dry up during extended periods of below normal precipitation. Spring-flow may be impacted through subsidence processes related to undermining of the overburden aquifers, potentially interrupting, and/or altering subsurface flow-paths. Springs and seeps are monitored regularly in order to assess impacts from mining. Where flows from springs and seeps are impacted, water quantity and water rights have the potential to be impacted. Impacts to water rights are assessed and evaluated with respect to regional and local impacts to spring systems that feed surface water resources.

As underground mining thus far has progressed through Panel 4 and part of Panel 5, potential impacts to surface waters have been confined to springs located over or proximal to undermined areas. Impacts due to subsidence include diminution of spring flows at spring 17145, and increases in SC at spring 17275. SPE has begun to implement remedial mitigation measures at spring 17145, and continues to monitor water quality and quantity to assess whether recently identified impacts are temporary in nature, or will require more permanent solutions. Impacts identified thus far are anticipated and mitigation measures have been implemented as prescribed in the operating permit, in response to these anticipated changes.

To date, no adverse impacts to surface waters from undermining and subsidence is evident. Impacts are limited to springs over mined areas, and no subsidence impacts to surface waters has been observed or recorded outside of the permit boundary. As the current mining activity is proposed throughout the permit area, impacts similar to those observed are expected to occur as

mining continues. As impacts occur, mitigation procedures as described in Section 314-3 of the permit will be employed to remediate affected resources.

Surface water runoff in the facilities area and WDA is controlled through a series of ponds and diversion structures and regulated through DEQ's MPDES program. Discharges to surface waters are very infrequent with the first discharges in 20 years occurring during extreme wet periods in 2011, 2013, and 2014.

Water management controls on peripheral infrastructure and facilities (permit lands not including the main facilities and WDAs) include structures to control runoff from mine roads, pads, and other land surface disturbances, and are managed through the implementation of Best Management Practices. Best Management Practices typically include a variety of design considerations (culvert sizing, berming, placement of structures, etc.) and are described in detail in SMP C1993017, Vol. 3, Section 314, 3.0, Surface Water and Groundwater Control and Treatment Plan. Evaluation of impacts relating to surface water runoff and management are evaluated with respect to adherence to approved design plans and permit conditions in controlling and managing surface runoff.

Groundwater

The two main potential impacts to groundwater from mining are reductions in available water quantity at wells due to drawdown and migration of lower quality water off site. These potential impacts are evaluated by monitoring water levels and quality in a network of 105 monitoring wells installed in the alluvium, overburden, Mammoth coal, upper underburden, and deeper underburden. Evaluation of potential future impacts is also assisted by the use of a groundwater model.

Alluvial groundwater quality changes have been noted in a well (BMP-33) immediately down gradient of one sediment pond. It is unclear if the changes observed in BMP-33 have been affected by storage of water in this sediment pond. Similar water quality changes in the alluvial groundwater occurred throughout the area in response to an unusually wet year in 2011. SPE has changed their water management procedures to limit the storage of water in this pond. Continued monitoring will be used to evaluate any further changes in water quality in BMP-33, and further action will be taken if necessary to prevent adverse impacts to alluvial groundwater.

Comparisons of alluvial groundwater levels and quality in drainages undermined by the longwall to those in undisturbed drainages indicate that undermining has had no effect on alluvial groundwater quantity or quality. Because of these observations and the similar nature of the alluvial groundwater which will be undermined in the future, no future impacts to alluvial groundwater are anticipated and AM3 is designed to prevent material damage to alluvial groundwater quantity and quality.

Monitoring wells completed in the overburden indicate that declines in water level in overburden groundwater only occur immediately before undermining by the longwall. Drawdown in the overburden as a result of mining does not extend very far from the mined area. No water quality

changes have been observed in overburden monitoring wells which have been undermined or are near the mining area. Future water quantity impacts are expected to be similar to the observed impacts to date, and limited to the immediate mining area. Because fracturing associated with subsidence does not significantly change the availability of dissolved ions, no changes in overburden groundwater quality are expected in future undermined areas. No future impacts to overburden groundwater quantity or quality outside of the permit area are expected, thus AM3 is designed to prevent material damage to overburden groundwater quantity and quality.

Monitoring indicates that water levels in the Mammoth coal around the mined area are decreasing to form a cone of depression as predicted in the PHC and groundwater model. The current maximum drawdown of approximately 50 feet occurs at well BMP-8 in the mine area. After mining is completed, the Mammoth coal within the mine area is replaced by the fractured overburden material (gob) which collapses into the mine void. Water levels in the gob and Mammoth coal are expected to slowly recover. The groundwater model predicts water levels will reach near-stable postmine levels within 50 years after mining. Water levels are predicted to be similar to pre-mining conditions, except in the south portion of the mine area, where some residual drawdown is expected to be permanent due to the changes in permeability from coal to gob. Because drawdown is not expected to adversely impact any Mammoth coal groundwater users outside the permit boundary, AM3 is designed to prevent material damage to Mammoth coal groundwater quantity.

No changes to Mammoth coal groundwater quality have been observed, even in areas where drawdown is occurring. Because of the increased availability of dissolved ions from the fractured mine gob, water quality in the gob groundwater is expected to be poorer than baseline water quality in the Mammoth coal. Initial water quality samples were collected from the mine gob in longwall panels 3 and 5 in 2015, and had a median specific conductance (SC) of 4,590 uS/cm. Water quality samples from older mines near Roundup have shown a median SC of 3,038 uS/cm. It is likely the eventual SC in the Bull Mountains Mine gob will be lower than the initial samples, but not as low as the Roundup mines due to the different mining methods used. Using the quantities of water flowing into the coal north of the mine after mining (as predicted by the groundwater model), the sampled gob water quality, and the median overburden water quality in the area near the north edge of the mine, a simple mixing calculation results in a SC at the north permit boundary of 2,674 uS/cm. Due to the effects of dispersion and sorption, two natural processes which tend to reduce solute concentrations, the actual SC at the permit boundary after mining is likely to be less than this calculated value. Baseline Mammoth coal water quality in this area ranges in SC from 1,500 to 3,900 uS/cm with a median of 2,550 uS/cm. The most reliable Mammoth coal well north of the mine with the longest period of record has a median SC of 2,605 uS/cm. Figure 9-41 of the CHIA illustrates that any changes in water quality outside of the permit boundary due to migration of gob water into the Mammoth coal will be minor. Figure 9-42 of the CHIA shows that postmine Mammoth coal water quality outside of the permit boundary will be equally suitable for beneficial uses as the natural Mammoth coal groundwater.

Based on all available information and the above predictions and analysis it is unlikely that mining will cause any changes in water quality outside the permit area which are harmful, detrimental, or injurious to the beneficial uses of Mammoth coal groundwater, or cause any

numeric standard to be violated. Therefore AM3 is designed to prevent material damage to Mammoth coal groundwater quality.

Observations of water quantity and quality in the upper underburden indicate some hydraulic connectivity between the upper underburden and the Mammoth coal, and drawdown observed in the upper underburden is similar to that in the Mammoth coal. Water level recovery after mining in the upper underburden is expected to occur similarly to that described for the Mammoth coal above. Because drawdown is not expected to adversely impact any upper underburden groundwater users outside the permit boundary, AM3 is designed to prevent material damage to upper underburden groundwater quantity.

No water quality impacts attributable to mining have been observed in the upper underburden. Because the upper underburden exhibits some hydraulic connection with the Mammoth coal, gob water migration into the upper underburden after mining is also possible. However, due to the lower conductivity of the upper underburden compared to the Mammoth coal any impacts in the upper underburden are expected to be less than those observed in the Mammoth coal and described above, thus AM3 is designed to prevent material damage to upper underburden groundwater quality.

Monitoring of the deeper underburden has shown no effects on water quality or quantity due to mining. Due to its isolation from the Mammoth coal and upper underburden by thick layers of low permeability rocks, no water quantity or quality impacts to the deeper underburden are expected as a result of mining, thus AM3 is designed to prevent material damage to deeper underburden groundwater quantity and quality.

F. Cultural and Historic Resources

The proposed AM3 amendment is for the extension of underground activities of an existing mine. The only significant surface disturbance anticipated is the possibility of some surface failure in areas of steep slopes where few archeological/historical resources are expected. Roads and pads will be located above the panels; however, archaeological surveys are required to be completed two years prior to mining and will allow for the identified sites to be avoided or mitigated with approval from the Montana State Historical Preservation Office (SHPO). Protection of any incidentally discovered sites is stipulated in the approved mining permit or extension of underground activities of an existing mine.

G. Bonding

The estimate of reclamation costs and associated bonding requirements were updated for this amendment. For organizational purposes, the bond estimate is divided into Phases 1, 2 and 3. In general, Phase 1 relates to the cost for reclaiming the historic mine facilities which were in place prior to SPE ownership. Phase 2 reclamation costs are related to facility improvements which have taken place under SPE ownership. The Phase 3 costs relate to the removal of underground mining equipment and the reclamation of lands and facilities above the underground mining.

Where appropriate, all previous bond items were adjusted for inflation by using current cost data. The primary changes to the bond estimate are due to the additional costs of reclamation for new roads, bore-hole pads, and facilities as well as reductions for the completed reclamation of obsolete stockpiles and facilities. The major changes to the bond amount are summarized as follows:

The primary change to the Phase 1 estimate is a reduction of \$500,400 as a result of completing the removal of a coal waste Stockpile 1A.

The Phase 2 estimate reflects the costs of reclaiming the main facilities area. Since no significant changes will be made to the facilities area, this phase of the bond estimate is not changed.

The Phase 3 estimate is increased by \$762,357 to account for the reclamation of additional roads, borehole pads and service pads.

Phase 1, 2 and 3 Bond Summary

	Previous Amount	Adjusted Amount	Net Change
Phase 1	\$4,139,174	\$ 3,589,936	-\$ 549,238
Phase 2	\$4,950,636	\$ 4,950,636	\$ 0
<u>Phase 3</u>	<u>\$1,770,701</u>	<u>\$ 2,653,839</u>	<u>+\$ 762,357</u>
Total	\$10,860,511	\$ 11,194,411	+\$ 333,900

III. FINDINGS

- A. DEQ has determined that the Bull Mountains Mine amendment/revision AM3, received October 5, 2012, and revised through May 5, 2016, 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 amendment 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. Not proposing disturbance within 100 feet, horizontally, of the outside right-of-way line of a public road (Fattig Creek county road in AM3) and, therefore, ARM 17.24.1134 does not apply to this permitting action. However, a signed agreement with Musselshell County to allow mining activities under the road is included in the permit as Exhibit 901-2 within Volume 5.
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 I 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. One occupied structure and three associated structures are contained in the revision area that will be affected by subsidence. The Sheila and Paul Soderberg residence (Tract 44 of Township 6 North, Range 27 East, Section 4) is located within the amendment boundary and will be mined under by room and pillar method. There is no subsidence planned within 700 feet of these structures. There is on additional metal pole frame structure owned by Dale B. Wallace that will be affected by subsidence within the amendment area. This structure is inside the longwall extraction perimeter at the north end of Panel 12. No damage is expected to this structure.
- 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 June 27, 2016.
- 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, and 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 June 27, 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 June 27, 2016).

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 AM3.

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. The AM3 amendment extends the underground activities of an existing mine, and the only significant surface disturbance anticipated is the possibility of some surface failure in areas of steep slopes where few archeological/historical resources are expected as well as drill pad locations and some additional roads. No additional archeological or historical sites have been discovered, and no impacts to known archeological or historical sites should occur. Nevertheless, SPE has agreed to complete Class III level studies above the mineplan area approximately two panels (two years) in advance of longwall extraction. 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 AM3 amendment application and these findings, DEQ hereby approves the AM3 amendment application as revised through May 5, 2016.