



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

May 1, 2019

John Byars, General Manager
Canyon Fuel Company, LLC
597 South SR24
Salina, Utah 84654

Subject: Conditional Approval of Pines East Panels, Canyon Fuel Company, LLC, Sufco Mine, C/041/0002, Task #5918

Dear Mr. Byars:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Please submit these copies by June 3, 2019. Once we receive these copies, final approval will be granted.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve Christensen".

Steve Christensen
Coal Program Manager

SKC/sqs
O:\041002.SUF\WG5918 PINES\CONDITIONALAPPROVAL.DOC





GARY R. HERBERT
Governor
SPENCER J. COX
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0410002
TaskID: 5918
Mine Name: SUFCO MINE
Title: PINES EAST PANELS

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for historic and archeological resource information.

In an email dated 4/5/2019, Charmaine Thompson of the Manti-La Sal National Forest determined that there is no potential to affect historic properties, to which DOGM agrees, because there is no planned subsidence for Task #5918 and therefore consultation with SHPO is not needed at this time.

After multiple discussions with Ms. Thompson, it was determined that the existing cultural resource reports—one from 1997 titled "Cultural Resource Evaluation of a Potential Mining Subsidence Zone in the Pines Locality" and another from 2018 titled "A Class III Cultural Resource Inventory for Canyon Fuel Company, LLC's SUFCO Mine 2018 Exploratory Drill Locations"—are insufficient for permitting subsidence mining in the southern portion of the Pines Lease tract. Following discussions with Ms. Thompson and SUFCO representatives, it was determined that the best path forward for this project was to split the original proposal (Task #s 5777 and 5852) into separate amendments: one which proposes developmental mining only, and one which proposes longwall mining. This amendment (Task #5918) represents the first of those proposals by planning for developmental mining only. Approval of this amendment will allow the mine to begin first mining in the southern portion of the Pines Lease tract while a cultural resource survey that covers the area above is performed in the spring/summer of 2019. Upon receipt of the survey report, the mine may then proceed to apply for the second amendment, one that proposes longwall mining.

tmiller

Hydro Baseline Information

Analysis:

The amendment meets the State of Utah R645 requirements for Baseline Information.

The amendment and information within the MRP includes narratives and maps outlining baseline hydrologic, geologic, and climatological information. Information on the Pines lease was first incorporated into the MRP when it was permitted for mining in the late 1990's. The permittee has kept up on lease commitments within the MRP keeping baseline information relevant and up to date for the three proposed panels along the eastern extent of the lease.

Baseline groundwater, surface water, and climatic information is up to date. The Permittee has monitored surface and groundwater sites within and adjacent to the Pines lease since the mid- to late-1990's up to the present. Plate 7-10 shows operational monitoring sites which are monitored as outline in Table 7-2 of the Water Monitoring Program. These

monitoring data have been uploaded to the Division's water monitoring database on a quarterly basis that continues through to the present. The correlation of climate and surface and groundwater quantity in the Pines lease has been analyzed in annual reports and submitted to the Division. These reports provide baseline climatic information extending back to the early 2000's.

kstorrar

Probable Hydrologic Consequences Determination

Analysis:

The amendment meets the State of Utah R645 requirements for Probable Hydrologic Consequences.

The Pines Tract is the eastern most coal lease at the Sufco mine. The proposed development rooms underlying the plateau are bound on the eastern edge by cliff escarpments. Springs are scarce within the lease area and mostly located in Box Canyon and the East Fork of Box Canyon. These springs are $\frac{3}{4}$'s of a mile away and down-dip from the three proposed panels. The original PHC for the Pines lease is located in Appendix 7-18 in the MRP. The hydrogeologic function of probable mining impacts within the lease area outlined in this PHC is still relevant. The amendment also includes a supplement to Appendix 7-18 dated November 8, 2018. This supplemental material evaluates the probable hydrologic consequence of mining the panels up-gradient and near Spring 310.

kstorrar

Hydro GroundWater Monitoring Plan

Analysis:

The amendment meets the State of Utah R645 requirements for baseline Groundwater Monitoring.

The MRP outlines groundwater monitoring in the Water Monitoring Program. Groundwater discharge is monitored at multiple spring locations within the lease. The data for these springs extends back to the mid- to late-1990's providing a robust baseline for groundwater within the lease area.

kstorrar

Hydro SurfaceWater Monitoring Plan

Analysis:

The amendment meets the State of Utah R645 requirements for baseline Surface Water Monitoring.

The MRP outlines surface water monitoring in the Water Monitoring Program. Surface water is monitored at multiple stream locations within and adjacent to the lease area. These stream monitoring data sets extend back to the mid- to late-1990's providing a robust baseline for surface water resources within the lease area.

kstorrar

Operation Plan

Subsidence Control Plan Subsidence

Analysis:

The application meets the State of Utah R645 requirements for Subsidence Control Plans.

The application satisfies the requirements for R645-301-525 because of narrative on pages 5-11, 5-17, and 5-26 that clarify the mine plans for this area. This section of the Pines lease is planned for room-and-pillar mining methods and no subsidence is projected to occur. Since subsidence is not anticipated, subsidence monitoring is not planned for these areas at this time.

jeatchel

Fish and Wildlife Bald and Golden Eagles

Analysis:

The amendment meets the State of Utah R645-301-358 requirements for fish and wildlife bald and golden eagle protection.

No impact to bald or golden eagles from the proposed Pines East Panel amendment is anticipated, but should concerns arise from the monitoring of nests in the area, modifications to the mine plan may be made in accordance with R645-301-358.200.

Maps showing the location of raptor nests can be found in the confidential portion of the MRP. These maps show few nests in the area of the Pines East panels, none of which are over the area of the panels. The closest nests are 322 and 810, golden eagle nests that have not been observed in over 10 years. Following consultation with the Manti-La Sal National Forest, the closest nest that would be of concern is nest 811, a golden eagle nest located roughly 1/3-mile outside the area of the panel locations. Forest Service personnel monitor this nest annually and will continue to do so into the future. The Permittee has also committed to surveying the area of the Pines East panels for raptors in 2019.

tmiller

Vegetation

Analysis:

The amendment meets the State of Utah R645-301-331 requirements for vegetation.

Chapter 3 Section 3.2.2.2 details site specific resource information including information for the Pines East Panels. There are no new surface disturbances and no planned subsidence associated with this amendment.

tmiller

Hydrologic Ground Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment includes groundwater monitoring of the Castlegate bedrock aquifer underlying the East Fork of Box Canyon. The bedrock aquifer rests at the base of the Castlegate Sandstone and is dominated by fracture flow along a northwest gradient. This aquifer is discussed in the USGS report 'Hydrology and Effects of Mining in The Quitcupah and Pines Coal-Lease Tracts, Central Utah'. Wells originally installed for North Water spring mitigation investigating are screened within this aquifer. The well NW4-09 that was part of this mitigation project will be operationally monitored to ensure upgradient mining does not impact this water source.

The old mains and proposed panels will nearly undermine a spring with a water right associated with it within the Pines East lease. Spring 94-591 is to the east of the Pines East mains and will fall west of the proposed panels. In order to ensure mining does not impact this resource it will be operationally monitored for flow.

A shallow perched lens bedrock aquifer within the Castlegate formation discharges at Spring 310 upper. This perched aquifer is vertically separate from the saturated aquifer at the base of the Castlegate. The spring 310 monitoring site has been operationally monitored for years and will continue to be monitored as part of the water monitoring program. This spring site is the first downgradient discharge location from the proposed panels. It will be a good indicator site for monitoring potential mining related impacts to the hydrologic balance within the lease area.

kstorrar

Hydro Surface Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The operational surface water monitoring plan includes sites within and adjacent to the proposed mining area. There are limited surface water resources within the vicinity of the proposed panels in the Pines East lease. The operational Water Monitoring Program in Table 7-2 and Plate 7-10 identifies the surface water monitoring sites within and adjacent to the lease. The surface water monitoring sites are for the two major waterway canyons flowing off of the plateau including sites in Link Canyon and the East Fork of Box Canyon.

kstorrar

Maps Mine Workings

Analysis:

The application meets the State of Utah R645 requirements for Mine Workings Maps.

The application satisfies the requirements for R645-301-512.110 because in addition to the narrative describing where the mine plans reside within the permit area, Plates 5-1, 5-7, 5-10, 5-10C, 5-11, 7-2, 7-3, and 7-10 illustrate exactly where the proposed plans reside in relation to adjacent mined out areas within the lease. All of these Plates have been stamped and signed by Jacob D. Smith, a Registered Professional Engineer in the State of Utah.

jeatchel

Maps Monitoring and Sampling Locations

Analysis:

The amendment meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

The amendment provides Plate 7-10 showing the operational Hydrologic Monitoring Stations for the Sufco mine. The map shows mine workings for the proposed panels in the Pines lease in relation to the water monitoring sites. It is important to know the location of the proposed mining area when determining if the water monitoring program will adequately quantify potential impacts to the hydrologic balance.

kstorrar