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DEPARTMENT OF NATURAL RESOURCES

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Technical Analysis and Findings
Utah Coal Regulatory Program

PID: C0410002
TaskID: 4701
Mine Name: SUFCO MINE
Title: MIDTERM PERMIT REVIEW

General Contents

Identification of Interest

Analysis:

An AVS Evaluation was conducted on October 14, 2014. No anomalies were found for Ownership and Control. The information provided meets the requirements of the Utah Coal Rules.

sssteab

Permit Application Format and Contents

Analysis:

Between pages 5-47 and 5-48 it appears that information is missing.

Deficiencies Details:

R645-301-120 Between pages 5-47 and 5-48 it appears that information is missing. Please submit necessary changes to ensure all content is included.

adaniels

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The operator has continued to monitor cultural resources to determine the potential impacts of subsidence on known features. After some confusion on the potential adverse effect of subsidence on shelter 42SV3550, a field investigation was conducted to reevaluate the current (adverse) Determination of Effect. A new map was also provided by SUFCO (Chris Hansen). Based on the site visit and the new map the Forest Service revised their determination of effect document to no adverse effect. SHPO concurrence was received by the Division on 9/12/14.

Ireinhart

Vegetation Resource Information

Analysis:

The Operator has contracted vegetation monitoring out to Mt. Nebo Scientific, Inc from Springville, Utah. Mt. Nebo continues to provide a thorough analysis of all required vegetation monitoring committed by the Operator.

In 2013, a survey was conducted to locate representative populations of vegetation growing within bedding planes and fractures in the walls of Box Canyon. Careful attention was paid to locating Link Canyon Trail Columbine. None were found. A summary of the survey results indicate subsidence did not have any impact on the Columbine.

Some cursory analysis of changes in vegetation due to mining was completed in comparing the 2008 and 2013 color infrared photography. The division will further research the prospect of discontinuing the monitoring. The operator should obtain past or recent (2013 or 2014) aerial imagery for comparison to the imagery that may be required in 2018 or 2019.

The riparian plant community in the South Fork Quitcupah Creek was surveyed in 2013. Detailed data sheets were provided for future monitoring efforts.

In 2013 Mt. Nebo Scientific, Inc provided an updated report on the portal at the Link Canyon Portal. According to the report, the site the vegetation has become well established, has stabilized over-time and remains in good condition with respect to cover, diversity, density and productivity. According to the 2013 annual report, the Division approved the request to discontinue monitoring vegetation at this site and as such the requirement has been removed from the MRP and commitment list.

lreinhart

Land Use Resource Information

Analysis:

The Northwater Spring Mitigation Project has been initiated with the spring developments for livestock and wildlife watering. The solar pump/piping system was ineffective at producing required amounts of water for livestock and wildlife consumption and supplemental water was trucked in daily to meet the demand. The level of effort to maintain available drinking water is extremely high and will need to be improved. The operator will need to demonstrate a successful operation and maintenance record that represents a sustainable, long-term water replacement option.

lreinhart

Operation Plan

Mining Operations and Facilities

Analysis:

As part of the midterm review, a site visit was conducted 11/13 by Division staff to review the current status of the mining operations and facility. The site visit included walking around the Waste Rock Pile and the Main facility. The site operations were in concurrence with the narrative of the Sufco MRP at both the Waste Rock Site and the Main Facilities. The Waste Rock pile appeared stable with minimal signs of erosion.

cparker

Existing Structures

Analysis:

All structures witnessed at the main facility site visit on 11/13/14 by the Division staff were documented in the Sufco MRP and included in the Reclamation Cost Estimates for adequate bonding.

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Coal Recovery

Analysis:

Sufco operations observed and discussed with mine staff are concurrent with the narrative of the Sufco MRP.

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Subsidence Control Plan Subsidence

Analysis:

Current operations the result in subsidence follow the subsidence control plan detailed in the MRP. Subsidence monitoring included CIR coverage of the leases at least every five years with the last recorded in 2013 and the next flight in 2018. Typical subsidence experienced at the lease area is about four feet above longwall panels, with a draw angle of about 15 degrees. All subsidence areas are monitored and reported in the Annual report and displayed in a subsidence map.

cparker

Fish and Wildlife Endangered and Threatened

Analysis:

Operator continues to collect raptor data as required to determine if there are active nest sites within ½ mile of surface mining activities. There are 25 known nests with one active juvenile eagle that fledged and three new red-tailed hawk nests in the waste rock survey area. There have been no records of Mexican Spotted Owl. Additionally, annual monitoring of subsidence continues.

Operator conducts surveys for Northern Goshawk in Box Canyon. No northern goshawks or nests were detected within the survey areas in 2013 and the habitat in the survey areas is not optimal for goshawk nesting due to the lack of expansive, mature stands of timber.

The operator continues to cooperate with regulatory agencies to develop and provide alternative water sources for wildlife due to mine-related subsidence disturbing the present sources.

lreinhart

Road System Plans and Drawings

Analysis:

At the time of the site visit, road within the Waste Rock site and the Main Facilities appeared to be stable with well-maintained drainage to appropriate ponds. All roads witnessed at the site were also present and documented within the MRP.

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Spoil Waste Coal Mine Waste

Analysis:

Division staff inspected the Waste Rock refuse pile west of the main mining facilities. Staff walked along the reclaimed portions, recently repaired sections, and disturbed runoff sediment ponds/ditches. The currently waste placement is being end dumped to be later pushed into two foot lifts with a dozer. The site was appropriately graded to slope runoff towards the appropriate disturbed runoff ditch.

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Hydrologic General

Analysis:

The Permittee continues to meet the commitment to follow their water monitoring plan, and enter the data into the DOGM database. The commitment to collect climatologic data was met by the Permittee submitting a climatological report in the 2013 annual report. This report was prepared by Erik Peterson and utilized data collected by the mine as well as readily available data in the area. The northwater spring mitigation project commitments have not yet been fully met. The Permittee installed a spring collection and distribution system that was run during the 2014 summer season. During the period of operation, adjustments, corrections, and repairs were made to the system as needed to fill the water troughs on the rims of the canyon. The Permittee is currently working with the USFS to complete a mitigation project that would include enhancements to local riparian areas. The Permittee has not yet submitted as-built drawings for the spring collection system.

Hydrologic Water Quality Standards

Analysis:

The Permittee holds a current UPDES permit that includes 3 outfall locations. 001 is an emergency mine discharge point, 002 includes discharge from the East Spring Canyon sediment pond, and 003 is the discharge from the underground workings into Quitchupah Creek. The mine workings discharge varies between 800 and 3000 gpm.

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Hydrologic Impoundments

Analysis:

During a site visit on November 13, 2014, the sediment pond at the waste rock site, and the two sediment ponds at the mine's surface facilities appeared to be functioning as designed. These ponds have been designed and built in a way to meet the standards of BTCA to prevent additional contributions of suspended solids to stream flows outside of the permit.

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Signs and Markers

Analysis:

Required property ownership, entry, topsoil, subsoil, and warning signs were witnessed at the Waste Rock site and at the Main Mining Facilities.

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Explosives General

Analysis:

According to the MRP current mining and operation activities at Sufco do not require the use of blasting or explosives on the surface. Any future blasting associated with mining and reclamation activities that may be needed will be conducted in accordance with R645-301-524. All underground blasting activities at the mine are conducted under the direction of MSHA certified blaster.

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Reclamation Plan

Backfill and Grading General

Analysis:

Inspections of the reclaimed areas of the Waste Rock pile were stable and showed minimal signs of erosion. The terraced benches along the reclaimed areas are working adequately to disrupt runoff velocity and channel it into the appropriate drainage pond.

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Bonding and Insurance General

Analysis:

Canyon Fuel Company, LLC maintains a Surety bond of \$2,874,000 for the Sufco Mine through the surety company Lexon Insurance Co on 8/15/13. Ironshore Indemnity Inc. provided a rider as full guarantee for obligations undertaken by Lexon Insurance Co effective 8/15/13.

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Bonding Form of Bond

Analysis:

Canyon Fuel Company, LLC maintains a Surety bond through Lexon Insurance Co for the Sufco Mine.

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Bonding Determination of Amount

Analysis:

The Sufco mine currently has a surety bond in place covering \$2,874,000.

Deficiencies Details:

R645-301-830.140, -830.200, -830.300, & -830.410 The Permittee must provide updated information for the estimated bonding costs with supporting calculations for the estimates. This includes updated unit cost (to be used to update bond calculations spreadsheets) and updated escalation factors. Updates should be provided using the 2014 R.S. Mean Heavy Construction Cost data manual and the Caterpillar Handbook or other appropriate resources. The bond summary and corresponding bond calculation sheets in the MRP need to be updated and appropriately escalated to 2019 dollars using the Division's approved 1.9% and 5 year escalation. The Division approved escalation rate is based on the 5 year average of the U.S. Bureau of Labor Statistics Cost Index for Site Construction.

R645-301-830.400 The Division utilizes the midterm review process to review the individual mine bonds. Various errors were found in the current sheets within the MRP:

- Edits that decrease the subtotal of individual cost estimate sheets must go through R645-301-880.110-.300 or the Requirements to Release Performance Bonds.
- Updated various sub sheets that had been removed from the MRP
- Incorrect R.S. Mean unit cost data was utilized

R645-301-830.422 The Division will provide the permittee an opportunity for an informal conference on the adjustment. In the event the Permittee would like a conference, please contact the Division.

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Bonding Terms and Conditions Liability Insurance

Analysis:

Canyon Fuel Co, LLC maintains liability insurance on occurrence (\$500,000 aggregate per location) through National Union Fire Insurance Company, Pittsburgh PA. Their policy number is GL6576428 and expires in 2/01/015. The policy covers "Accord/Marsh Form" as well as explosives under XCU, both items required by State law.

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