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DEPARTMENT OF NATURAL RESOURCES
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Technical Analysis and Findings

Utah Coal Regulatory Program

April 16, 2015

PID: C0070013
TaskID: 4818
Mine Name: HORSE CANYON MINE
Title: FAN INSTALLATION

Summary

RECOMMENDATION:
Task ID # 4818 should be approved by the Division.

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Environmental Resource Information

Soils Resource Information

Analysis:

Analysis:
Plate 5-2 shows the area to be disturbed by the north breakouts. The north breakouts are situated on a sandstone ledge at an elevation of 6,450 ft. The ledge is approximately 300 ft. in elevation above the mine portals. Chap 2, p. 10 states that the land above the ledge is at a slope of 70% and 60% of the surface is covered by boulders, cobbles and rock fragments. There is no supporting documents provided, but Google Earth images of the location provides a visual confirmation, see attached. This area was previously disturbed for a temporary fan.

In Chap 5, p. 11, the north breakout soil disturbance is estimated to be the highwall height plus 40 ft. An area of 0.17 acres (or 150 ft long by 50 ft high) is shown as disturbed for the north breakouts on Plate 5-2.

The Order III NRCS soil survey of Emery County (Plate 2-1) shows this location as Map Unit NGG2, Gerst-Strych-Badland Complex, 30 - 70% slopes.

Findings:
The north breakout location fits into the category of adverse conditions, R645-301-232.700, where no topsoil is required to be recovered.

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Operation Plan

Mining Operations and Facilities

Analysis:

Analysis:
The Permittee is proposing to install a larger, blowing type ventilation fan at the north breakouts (2 entries) which are on a ledge permitted as an Alternate Sediment Control Area. The fan will be installed on a concrete pad (a permanent installation) between the two entries and will force air into the Mine in a blowing configuration. A ventilation survey of the underground workings has determined that the small fan located at the “0” entry (portal pad area) is inadequate to provide sufficient air volume for the proposed longwall panels (Panels # 1, 2, 3; see R2P2 5 Year mining projection map). This is a new surface facility installation, on a previously permitted disturbed area. The Permittee has prepared design drawings for the installation which appear to meet all the requirements of 30 CFR 75.300-2, Criteria, Installation of Main Fans.
Findings:
The permitting of this new fan installation is a minor amendment to the approved mining and reclamation plan for the Lila Canyon Mine, and it should be approved as submitted.

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Mining Operations and Facilities

Analysis:

On March 20, 2015 the Division received an amendment to the Lila Canyon MRP to add a ventilation fan to the north portal breakout area. The current ventilation system is not adequate to supply the needed air to ventilate the three longwall panels off of the 1st East Main entries. The fan will be located on a currently disturbed portal pad area that has been permitted and is included in the MRP. The permittee will not be required to address any additional requirements of the Biology, Land use or Air Quality sections of the regulations. The amendment is recommended for approval.

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Topsoil and Subsoil

Analysis:

Analysis:
Although no topsoil will be recovered from the North Breakouts, the Permittee has presented a plan for topsoil protection 'in situ.' This plan is described in Chapter 5, p. 11, where the vegetation is removed, the soil is held in place with chain link and covered with shotcrete. This topsoil protection plan fulfills the requirements of R645-301-232.720 for suitable cover of the disturbance at final reclamation.

Findings:
The requirements of R645-301-232.720 have been met for the slope above the portals.

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Hydrologic Exemptions

Analysis:

The permittee has submitted an amendment to add a fan to the North Breakout Portal. This breakout is currently designated as an ASCA. The construction and operation of this fan should have no impacts on the designated ASCA's ability to handle the small amount of runoff it may receive. The amendment is recommended for approval.

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Support Facilites and Utility Installations

Analysis:

Analysis:
Plate 5-2, SURFACE AREA, Official Disturbed Boundary Map, depicts the route which will be followed within the Lila Canyon Mine disturbed area boundary to install power poles for the AC power going to the north breakouts fan installation. This auxiliary line will start at the NE corner of the electrical substation and run SE for 390 feet, installed on three poles. The power line then turns ENE for 775 feet mounted on four poles. Pole #7 is located 45 feet south of the existing belt portal transfer point. The final leg of the power line will span a length of 383 feet, terminating at pole #8, located within the north breakouts disturbed area boundary.

All surface power line structures at Lila Canyon have been constructed with raptor protection, (See R645-301-333.300).
The reclamation cost / bond estimate has been re-evaluated and the Permittee and the Division and it has been determined that the amount of bond currently posted is adequate to also include the reclamation of this ventilation fan facility and powerline.

Findings:
This section of Task ID # 4818 meets the minimum regulatory requirements of R645-301-526.

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Signs and Markers

Analysis:

Analysis:
Rock cover on the slope above the north portals has been estimated at approximately 60 %, therefore the installation of “T’ post disturbed area markers may be difficult. However, to install the anchor bolts for the chain link fencing (which will be placed to anchor the shotcrete), the Permittee will have a compressor, hose and sinking hammer at the site. This will ease the installation of “T” posts and the Permittee will be able to meet the requirements of R645-301-521.251.
Chapter 5, Page 24, sections R645-301-521.250, Perimeter Markers and -301-521.251 of the Lila Canyon mining and reclamation plan contain the Permittees commitment to meet the requirements of this section of the Coal Mining Rules.
Findings:
The approved mining and reclamation plan for the Lila Canyon Mine contains the commitment to install perimeter markers prior to all disturbance associated with the Lila Canyon Mine.
This section of the R645 Coal Mining Rules has been adequately addressed.

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Maps Affected Area

Analysis:

Analysis:
Affected Area Maps
Mining Facilities Maps
Plate 5-2, SURFACE AREA, Official Disturbed Area Boundary Map has been submitted to depict the location of the proposed ventilation fan installation and its power line energy source.
The Plate is P.E. certified by Mr. R. Jay Marshall, Utah registered professional engineer, in accordance with the requirements of R645-301-512.120. Mr. Marshall’s P.E. stamp has been completed in accordance with the requirements of R156-22-601, Seal Requirements mandated by the Utah Division of Professional Licensing.
The Permittee submitted a document titled “Lila Canyon / Slope Stabilization / Scope of Work” to the Division on March 24, 2015 as a supplement to the original Task ID # 4818 application. This document should be included as additional information in reviewing the fan installation permit amendment.
Two drawings are included in the Slope Stabilization document;
1) Slope Stability, which is a plan view of the ASCA, and the slope which is to be stabilized above the two mine breakouts, (shot creted area is shown to vary from 20 feet to 36 feet in width, with an approximate length of 108 feet (0.07 acres)), and 2) a cross-section drawing titled “HIGH WALL BOLTING PLAN” (Plate 1 of 1) which depicts the height of the highwall, the depth and spacing of the anchor bolts (both on the perimeter edges and centrally) to be installed to secure the chain link fence material, and the 1 inch PVC drain pipes which are to be installed to release water from behind the shot crete. The shot crete is to be applied to a thickness of six inches over the chain link.
These two drawings provide additional information for the installation of the slope stabilization process. The drawings are not P.E. certified.

Findings:
Plate 5-2, SURFACE AREA, Official Disturbed Boundary Map adequately addresses the requirements for Affected Area and Mining Facilities Maps. The additional drawings provided in the Scope of Work plan support the information stated in pages 11 and 12, Chapter 2, Soils of the Task ID # 4818 application.

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Reclamation Plan

Mine Openings

Analysis:

DISTURBED AREAS
MINE OPENINGS
Regulatory Reference: R645-301-513, -301-529, -301-551
Analysis:
Chapter 5, page 64, sections -301-553.100 and -301-553.120 of Task ID #4818 address the reclamation of the ventilation fans at Lila Canyon. “The fans will be dismantled and either salvaged or taken underground. The chain link bolts will be cut off 6 inches below the surface and the shot-crete and mesh will be disposed of underground. The concrete (from the fan pad at the north breakouts / 7.4 cubic yards / PHH) will be buried during highwall reclamation” (See Chapter 5, page 61, section 542.640, of the Division approved MRP), “ concrete will be disposed of in the designated area and covered with 4 feet of cover”).
All reclamation work of the north portals breakout will have to be conducted from the underground workings, as no surface access road exists. Fill material to reclaim the north portals ASCA area will also have to be hauled through the Mine, as will the topsoil. Seeding will follow. The two entries will then be filled for a minimum distance of 25 feet, and then the final concrete block seals will be constructed (See Appendix 5-6, Closures for Mine Openings, Figure 4.6.2-1, Typical Final Reclamation Portal Seal).
Findings:
Information submitted on Page 64, section 553.120 of Chapter 5 of the Task ID # 4818 application and the information contained in the approved mining and reclamation plan adequately address the requirements of R645-301-513, -301-529, -301-551.
This section should be approved as submitted.

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Topsoil and Subsoil

Analysis:

Analysis:
Chapter 5, Appendix 5-6 and Section 553.120 (page 64) and Plate 5-9 describe the reclamation of the mine openings including the fan portals and breakouts. This section describes suitable material being placed against the portals and shaping of the slope back to original contour. Volumes of fill required to reclaim the cut at the breakout were not described. Please provide a volume estimate and source for the fill that will be required to reclaim for the north breakouts and south breakouts; and, include a figure for the north and south breakouts similar to Plate 5-9 which shows pre-existing, operating and final reclamation contours for the main mine entries.

A conditional approval letter should include these items:
Please provide the following in accordance with R645-301-121.100, R645-301-233 and R645-301-553:
1) Add the north and south breakouts to the facilities list in the legend of Plate 5-2.
2) Provide a 'clean copy' of page 64, Chapter 5.
and provide the following as-built information:
3) Update the MRP (Chapter 5 p. 64) with a volume estimate and source for the fill that will be required to reclaim for the north breakouts and south breakouts.
4) Create a figure for the north and south breakouts similar to Plate 5-9 which shows pre-existing, operating and final reclamation contours for the north and south breakout entries.

Findings:
Pending receipt of the above conditional approval information, the amendment will meet the requirements of R645-301-121.100, R645-301-233, and R645-301-553.

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Bonding Determination of Amount

Analysis:

Analysis:

The Permittee submitted added reclamation costs for the reclamation of the north breakouts ventilation fan ($ 48,625) and the surface power line to this fan ($ 2,432).
The Lila Canyon reclamation cost estimate was revised during the course of this review as the culverts to be removed under Task ID # 4712 are being removed during the operational phase of mining. Thus, the demolition cost was reduced by $ 16,464.00. (Total DEMO Cost is now $ 572,955.00).
The demolition of the Task ID # 4818 North Breakouts Fan Installation adds $ 51,057.00.
The new demolition total for the Lila Canyon Mine is now $ 624,012.00.
Backfilling and Grading Direct Cost remains the same @ $ 494,815.00.
The Revegetation Direct Cost remains the same @ $ 237,731.00.

TOTAL Direct Costs = $ 1,356,558.00
Indirect Costs = 26.8 % of Direct Costs = $ 363,558.00

TOTAL Reclamation Cost for 2013 = $ 1,720,116.00
Escalate to 2015 (1.019 for 2 years = 1.03836) $ 65,984.00

TOTAL Reclamation Cost to 2015 = $ 1,786,100.00
Number of Years to 2018 (Next Midterm Review) = 3@1.012 1.0364
Escalation Dollar Amount to 2018 = $ 65,014.00

TOTAL Escalated Reclamation Cost to 2018 = $ 1, 851,114.00

Required Bond Amount (Rounded to Nearest $ 1,000) = $ 1,851,000.00
Posted Bond 7/25/2012 per Task ID #4090 = $ 1,799,000.00
Difference Between Posted Bond and Required Bond = $ 52,000.00
Percent Difference = -2.9 %

Since the differential in the bond posted amount and the bond required amount only amounts to – 2.9 %, and since this amount is less than 5 %, there is no need to post additional bond at this time.
Findings:
The currently posted bond amount of $ 1,799,000 is adequate to reclaim the Lila Canyon Mine including the new north breakouts fan installation and its associated power line through 2018.
Task ID # 4818 should be approved.

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5/2013
South Breakouts
North Breakout
Lila Canyon Mine
Image USDA Farm Service Agency
Google earth
1998
Imagery Date: 5/31/2013 39°25'34.12" N 110°20'37.55" W elev 6100 ft eye alt 7781 ft


5/2013
North Breakout
Image USDA Farm Service Agency
Google earth
1998
Imagery Date: 5/31/2013 39°25'38.70" N 110°20'32.03" W elev 6400 ft eye alt 6623 ft