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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

October 16, 2019

Corey Heaps, Mine Manager  
Canyon Fuel Company, LLC  
HC 35 Box 380  
Helper, Utah 84526

Subject: Completion of Midterm Review, Task #5979, Canyon Fuel Company, LLC, Skyline Mine, C/007/0005

Dear Mr. Heaps:

On August 13, 2019, Canyon Fuel Company, LLC was informed that the Division of Oil, Gas and Mining (the Division) had commenced a midterm permit review for the Skyline Mine.

The midterm review has now been completed and will now be closed; however, the Division has identified deficiencies that must be addressed. The deficiencies have been included with this letter (See Attached). The name of the author for each of the respective deficiencies has been provided.

Your response to these deficiencies will need to be submitted as an amendment to your MRP and will be processed as a separate task. Please submit the required amendment with the accompanying C1 and C2 forms by no later than November 22, 2019.

If you have any questions regarding these requirements or the Midterm Review process, please don't hesitate to call me at 801-538-5350.

Sincerely,

Steve Christensen  
Coal Program Manager

SKC/sqs  
cc: Gregg Galecki, CFC  
O:\007005.SKY\WG5979 MIDTERM\MidtermCompletion.doc





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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0070005  
**TaskID:** 5979  
**Mine Name:** SKYLINE MINE  
**Title:** MIDTERM PERMIT REVIEW

### General Contents

#### Identification of Interest

*Analysis:*

The application does not meet the State of Utah R645 requirements for Ownership and Control.

Corey Heaps, Vice President of Operations must be added to General Chapter 1 for Wolverine Fuels, LLC. Corey Heaps (VP of Operations) came on in June of 2018. See <http://wolverinefuels.com/team/> .

Table 1-1 Coal Mining and Reclamation Operations (e-p. 15) in General Chapter 1 must be updated with current information.

*Deficiencies Details:*

The application does not meet the R645-301-112, ownership and control requirements. The following deficiency must be addressed prior to final approval:

R645-301-112.300, Corey Heaps, Vice President of Operations must be added to General Chapter 1 for Wolverine Fuels, LLC.

R645-301-112.340, Table 1-1 Coal Mining and Reclamation Operations in General Chapter 1 must be updated with current information.

pburton

#### Violation Information

*Analysis:*

The application does not meet the State of Utah R645 requirements for Violation information. Table 1-2 Violation Information (e-p 16) in General Chapter 1 must be updated with current information.

*Deficiencies Details:*

The application does not meet the R645-301-121.100, current information requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.100, Table 1-2 Violation Information (e-p 16) in General Chapter 1 must be updated.

pburton

## Permit Application Format and Contents

### Analysis:

The application does not meet the State of Utah R645 requirements for permit application format and contents. The MRP Table of Contents is out of date and must be updated.

### Deficiencies Details:

The application does not meet the R645-301-121.100, current information requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.100, The MRP Table of Contents is out of date and must be updated.

pburton

## Environmental Resource Information

### Soils Resource Information

#### Analysis:

The application meets the State of Utah R645 requirements for soil survey. The soil surveys for each area of disturbance are discussed in Chapter 2, Section 2.11.

pburton

### Maps Vegetation Reference Area

#### Analysis:

The application does not meet the State of Utah R645-301-323 requirements for Vegetation Reference Area Maps.

Drawing 2.7.1-2 indicates the location of each of the 11 reference areas and also includes GPS coordinates for each. Most of these coordinates appear adequate, however, some, including the WQ Sagebrush/Grass and the Swen's NOG Powerline Aspen/Grass, need revision as they are inaccurate. Also, the Portal Rail Loadout Conveyor S. Fork Sage reference area located in Burnout Canyon appears to have correct coordinates but may be slightly misplaced on the map.

#### Deficiencies Details:

The application does not meet the State of Utah R645-301-323 requirements for Vegetation Reference Area Maps. The following deficiency must be addressed prior to final approval:

R645-301-323: The Permittee must update incorrectly-cited GPS coordinates on DWG 2.7.1-2 of the MRP. Specific points that need revision include the coordinates for the WQ Sagebrush Grass and the Swen's NOG Powerline Aspen/Grass reference areas as well as the point on the map for the Portal Rail Loadout Conveyor S. Fork Sage reference area which is likely in the wrong place on the map or may have slightly incorrect GPS coordinates.

tmiller

## Operation Plan

### Subsidence Control Plan Subsidence

#### Analysis:

The application does not meet the State of Utah R645 requirements for Subsidence Control Plans.

When the Flat Canyon Lease 77114 was issued, one of the stipulations required monitoring of the dam at Boulger

Reservoir for mining-induced acceleration of 0.1g and greater as related to subsidence. In response, a network of six total seismic stations were proposed to study the effects of mining-induced seismicity in conjunction with monitoring at the dam. There is currently nothing in the Mining and Reclamation Plan that addresses the general engineering aspects related to the operation and reclamation of these seismic stations. Permittee must update the narrative in the Mining and Reclamation Plan to address the construction, maintenance, and reclamation operations for the proposed seismic stations. Narrative must include maps and plans that detail how Permittee will achieve compliance with proposed design criteria. Additionally, Permittee must provide concurrence letters from Dam Safety and the United States Forest Service.

*Deficiencies Details:*

The application does not meet the State of Utah R645 requirements for Subsidence Control Plans. The following deficiency must be addressed prior to final approval:

R645-301-525.440: Permittee must update the narrative in the Mining and Reclamation Plan to address the construction, maintenance, and reclamation operations for the proposed seismic stations. Narrative must include maps and plans that detail how Permittee will achieve compliance with proposed design criteria. Additionally, Permittee must provide concurrence letters from Dam Safety and the United States Forest Service.

jeatchel

## **Topsoil and Subsoil**

*Analysis:*

The application does not meet the State of Utah R645 requirements for clear and concise and current information regarding soils handling. The number and location of long term topsoil stockpiles must be updated with current information in Chap. 4, Section 4.6.2 ( e-p. 111).

Four stockpile areas are described in Section 4.6.2: portal, loadout, Winter Quarters and the Waste rock site. Area covered by the stockpile is provided in Section 4.6.2 and volume is given in Topsoil Redistribution Table 4.6-4. Swens canyon stockpiles must be added to this list. The Swen's Canyon and Waste rock site stockpile areas must be added to the narrative.

Chapter 4, Section 4.6.3 and 4.6.3 describe topsoil pile construction and protection. Table 4.6-1 lists the seeded species on the topsoil stockpiles.

The location of Swens Canyon soil sampling information referred to in MRP Section 2.11, p. 2-120(m) (c-p. 296) and Chap 4, Section 4.6.1, p. 4-34(b) (e-p 109) must be provided.

*Deficiencies Details:*

The application does not meet the R645-301-121.100 current information and R645-301-121.200, clear and concise requirements. The following deficiencies must be addressed prior to final approval:

R645-301-121.100, The number and location of long term topsoil stockpiles must be updated with current information in Chap. 4, Section 4.6.2 ( e-p. 111). The Swen's Canyon and Waste rock site stockpile areas must be added to the narrative.

R645-301-121.200, The location of Swens Canyon soil sampling information referred to in MRP Section 2.11, p. 2-120(m) and in Chap 4, p. 4-34 (b) must be provided on both pages where it is referenced.

pburton

## **Hydrologic Ground Water Monitoring**

*Analysis:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Ground Water Monitoring.

With the addition of the Flat Canyon lease, the Permittee established an agreement to expand the water monitoring program on the 28th of December, 2017. The water monitoring requirements within the MRP must be updated to reflect

this agreement.

*Deficiencies Details:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Ground Water Monitoring. The following deficiency must be addressed prior to final approval:

R645-301-731.210 The groundwater monitoring program and appropriate maps must be updated to reflect the December 28, 2017 agreement to expand the water monitoring program.

adaniels

## Hydro Surface Water Monitoring

*Analysis:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Surface Water Monitoring.

With the addition of the Flat Canyon lease, the Permittee established an agreement to expand the water monitoring program on the 28th of December, 2017. The water monitoring requirements within the MRP must be updated to reflect this agreement.

*Deficiencies Details:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Surface Water Monitoring. The following deficiency must be addressed prior to final approval:

R645-301-731.220 The surface water monitoring program and appropriate maps must be updated to reflect the December 28, 2017 agreement to expand the water monitoring program.

adaniels

## Hydrologic Impoundments

*Analysis:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Impoundments.

During the midterm site inspection on October 10, 2019, the sedimentation ponds were inspected. While inspecting the pond at the main mine surface facilities, questions arose regarding a 12" emergency spillway pipe shown on Plate 3.2.1-2B. The Permittee should evaluate the pond drawings and establish if there are updates necessary to the drawing in the MRP. While inspecting the pond at the loadout facilities it was unclear if a small inlet from the loadout support road to the sediment pond was an intended and designed inlet or had formed over time. This structure should also be evaluated to establish if Plate 3.2.1-4 needs to be updated as well.

*Deficiencies Details:*

The midterm review of the MRP does not meet the State of Utah R645 requirements for Hydrologic Impoundments. The following deficiency must be addressed prior to final approval:

R645-301-733 The Permittee must re-evaluate the pond drawings for the main surface facility sedimentation pond and the loadout sedimentation pond. Specifically the existence of a possible 12" emergency spillway pipe as shown on Plate 3.2.1-2B for the main surface facility pond and a possible additional inlet for the loadout pond from the adjacent access road on Plate 3.2.1-4.

adaniels

## Reclamation Plan

### Topsoil and Subsoil

*Analysis:*

The application does not meet the State of Utah R645 requirements for current information concerning soils redistribution. The Chapter 4 Table 4.6-4 Topsoil Redistribution must account for additional soil stockpiled at the waste

rock site in 2016. This will increase the stockpiled volume for redistribution at that site, changing the outlook for reclamation.

Topsoil redistribution is described in Chapter 4, Section 4.6.4 (e-p. 113). Reclamation of the Waste Rock site is described in 4.6.4.1 (e-p. 117). Reclamation of the waste rock site will require importing substitute topsoil. However, additional substitute topsoil stockpiled at the site in 2016 was not accounted for.

Topsoil redistribution volumes are provided in Table 4.6-4 (e-p. 119). This table includes volumes for the South Fork Breakout which has received Phase III bond release and volumes for North of Graben (NOG) shaft which was not developed. The total disturbed acreage is listed as 65.70 acres in the Table (including South Fork and NOG). The total volume of stockpiled soil is listed as 138,663 CY (including South Fork and NOG).

*Deficiencies Details:*

The application does not meet the R645-301-121.200, current information requirements. The following deficiency must be addressed prior to final approval:

R645-301-121.200, The Chapter 4 Table 4.6-4 Topsoil Redistribution table must account for current acreage and volumes, including additional soil stockpiled at the waste rock site in 2016 and minus the South Fork and North of Graben disturbed area/volumes.

pburton

## **Revegetation General Requirements**

*Analysis:*

The application does not meet the State of Utah R645-301-356 requirements for Revegetation General Requirements.

Ten of the eleven reference areas were observed during the midterm inspection. Due to the terrain, the Swen's NOG Powerline Conifer (Spruce) reference area could not be adequately seen. The 10 observed reference areas were all determined to be in good condition, representative of their vegetative type, and with no offsite impacts to report.

Drawing 2.7.1-2 indicates the location of each of the 11 reference areas and also includes GPS coordinates for each. Most of these coordinates appear adequate, however, some, including the WQ Sagebrush/Grass and the Swen's NOG Powerline Aspen/Grass, need revision as they are inaccurate. Also, the Portal Rail Loadout Conveyor S. Fork Sage reference area located in Burnout Canyon appears to have correct coordinates but is slightly misplaced on the map.

The location of the reference areas on a map and the GPS coordinates for each area were helpful in locating the reference areas, however, none were observed to have been marked in the field. The Division's Vegetation Information Guidelines require that reference areas be marked off with permanent, readily-visible markers in the field.

*Deficiencies Details:*

The application does not meet the State of Utah R645-301-356 requirements for Revegetation General Requirements. The following deficiency must be addressed prior to final approval:

R645-301-356: The Permittee must place permanent, readily-visible field markers (such as carsonite or t-posts at each corner, or a single signed post in the center) in the field at each reference area.

tmiller

## **Bonding Determination of Amount**

*Analysis:*

The midterm application does not meet the State of Utah R645 requirements for Determination of Bonding Amount.

A review of the reclamation bond on file with the Division has determined that the direct costs do not account for overhead and profit (O&P). The 2014 edition of the R.S. Means Heavy Construction Cost Manual was used to determine the majority of costs for demolition, earthwork, and revegetation, but only the bare costs were used in the calculation of the bond estimate. Bond must be recalculated using loaded direct unit costs that account for overhead and profit.

An arithmetic error is suspected to have occurred on page 70 of Chapter 4. Item 10 (Pond Enlargement) within the

Earthwork cost section lists several costs for a 980 G Series Loader: \$937, \$158, \$223, and \$284. The subtotal of costs at the bottom of the column gives a sum of \$17, not \$1,602.

The corrected costs should be escalated for 5 years at 2.32% out to 2024, the date of the next midterm review.

*Deficiencies Details:*

The midterm application does not meet the State of Utah R645 requirements for Determination of Bonding Amount. The following deficiency must be addressed prior to final approval:

R645-301-830: Permittee must address the following discrepancies in the reclamation bond:

- O&P must be included in all direct unit costs. Please recalculate bond using loaded direct unit costs that account for overhead and profit.
- Arithmetic error on page 70 of Chapter 4 must be corrected.
- Bond must account for costs associated with plugging and sealing all water monitoring wells drilled since the last midterm review.
- Bond must be escalated at 2.32% to 2024, the date of the next midterm review.

jeatchel