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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

September 21, 2020

Kirt Tatton, General Manager  
Canyon Fuel Company, LLC  
P.O. Box 1029  
Wellington, Utah 84542

Subject: Completion of Midterm Review, Canyon Fuel Company, LLC, Dugout Canyon Mine, C/007/0039, Task #6180

Dear Mr. Tatton:

On July 29, 2020, Canyon Fuel Company, LLC was informed that the Division of Oil, Gas and Mining (the Division) had commenced a midterm permit review for the Dugout Canyon 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 6, 2020.

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: Jay Marshall, CFC  
Vicky Miller, CFC

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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0070039  
**TaskID:** 6180  
**Mine Name:** DUGOUT CANYON MINE  
**Title:** MIDTERM PERMIT REVIEW

#### General Contents

##### Identification of Interest

###### Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements Identification of Interest.

On November 8, 2019, the Canyon Fuel Company, LLC General Chapter 1 was revised to add the following ownership and control updates to Wolverine Fuels, LLC: Corey Heaps was assigned VP of Operations from 7/16/18 to 10/31/19 and following his tenure of VP of Operations, was reassigned to the position of Vice President, Engineering and Safety effective 10/31/19; Carson Pollastro was appointed as Chief Operating Officer on 10/31/19; and Garrett Atwood was appointed Vice President, Commercial Operations on 7/16/18.

The above-noted revisions were added to the OSM Applicant/Violator System on 11/21/19.

This information was submitted, reviewed and approved through Task ID 6015.

adaniels

##### Violation Information

###### Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements for Violation Information.

The Canyon Fuel Company, LLC General Chapter 1 contains Table 1-2 Three Year Violation History of Mining and Reclamation Operations. The table lists no violations in the last 3 year period.

This information was submitted, reviewed and approved through Task ID 6015.

adaniels

##### Permit Term

###### Analysis:

The Mining and Reclamation Plan does not meet the requirements of the Utah R645 requirements for General Contents: Permit Term.

The Permittee must verify the total disturbed area of 108.7 acres stated in Chap 1 on p. 1-9, because Phase III bond release of degas well pads 3 & 4 and placement of additional soil stockpiles at the Soldier Cyn site have not been taken into account.

The total disturbed area is approximately 108.7 acres (p. 1-9):

Mine facility (incl. Gilson well pad & substation)	= 20.80 acres
Degas pads (incl. Phase III wells)	= 41.5 acres
AMV Road	= 14.25 acres
Topsoil stockpile (at Soldier Cyn)	= 0.85 acre
Leachfield /pipeline	= 1.8 acres
Pace Canyon	= 2.7 acres
Refuse Pile	= <u>26.8 acres</u>
Total	= 108.7 acres

This permit area includes the degas pads 3 and 4 that have received Phase III bond release (Degas Volume, Attach 2-4). If the statement on page 1-9 is correct that degas pads 3 and 4 are included in the 108.7 acres, then the acreage should be changed to 108.7 minus 1.82 acres that received Phase III in 2016 (Task 5192).

In addition the total disturbed acreage on page 1-9 does not account for the total topsoil storage area at the Soldier Canyon site. The Division calculates the Dugout stockpile area at the Soldier Canyon site to be 5.5 acres. (That is the Plate 2-3 total disturbed area of 7.8 acres minus the Soldier Cyn Ex. 5.21-2 disturbed area of 2.3 acres.)

*Deficiencies Details:*

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

R645-301-116, The Permittee must verify the total disturbed area of 108.7 acres stated in Chap 1 on p. 1-9, because Phase III bond release of degas well pads 3 & 4 and placement of additional soil stockpiles at the Soldier Cyn site have not been taken into account.

pburton

## Operation Plan

### Topsoil and Subsoil

*Analysis:*

The Mining and Reclamation Plan meets the requirements of the Utah R645 requirements for Soil: Operation Plan.

Plate 2-3 shows five stockpiles located at the Soldier Canyon storage site. Plate PC5-2 shows two stockpiles and the Pace Canyon site. Plate 2-3A (at the end of Chapter 2) shows a third stockpile location for the Pace Canyon facility soils at site G3. However, G3 received phase III bond release in 2016 (Task 5192) and this stockpile was consumed in reclamation. Waste Rock site stockpiles are shown on RA Plate 2-2. The results of soil sampling are in Appendix 2-4.

Chapter 2, Table 2-2 on MRP page 2-33 lists the volumes in storage at the Soldier Canyon site (26247 CY) and at Pace Canyon (3,159 CY). (An as-built drawing of the Pace Canyon stockpiles is found at the end of Appendix 2-9.) Refuse site topsoil and subsoil volumes are shown on RA Plate 2-2, RA Plate 5-1, and in RA Attachment 2-2 Figures. Phase II expansion of the refuse site and contemporaneous reclamation of Phase I are occurring contemporaneously, so the stockpile volumes are in flux.

The topsoil stockpile construction is described in MRP Section 231.400 and Section 234.200. All stockpiles are protected by a berm/ditch. All stockpiles were seeded with an interim mix of Indian ricegrass, western wheatgrass, slender wheatgrass, thickspike wheatgrass and Kentucky blugrass (Chap. 3, Section 341.200, p. 3-34).

During the mid-term inspection on 9/10/2020, the Pace Canyon topsoil stockpiles were observed to be stable and vegetated with yarrow, sagebrush, rabbitbrush and grass species. At the waste rock site, short term stockpiles shown on

RA Attachment 2-2 and live haul soils from the sediment pond #2 area were being redistributed. After the 2020 contemporaneous reclamation is completed, the volumes remaining in storage will be confirmed by an aerial survey (Section 232.100 and Section 232.500).

On June 18, 2020 Soldier Canyon stockpile site were observed to be sparsely vegetated with sagebrush, rabbitbrush, a mustard weed and yellow sweet clover (Inspection Report #6700 on June 18, 2020).

pburton

## Hydrologic Ground Water Monitoring

### Analysis:

The midterm review of the MRP meets the requirements of Hydrologic: Ground Water Monitoring.

The Dugout ground water monitoring continues to be carried out in compliance with the approved plan contained in the MRP and is entered into the DOGM database in a timely manner. The monitoring plan was last updated in Fall of 2019.

adaniels

## Hydro Surface Water Monitoring

### Analysis:

The midterm review of the MRP meets the requirements of Hydrologic: Surface Water Monitoring.

The Dugout surface water monitoring continues to be carried out in compliance with the approved plan contained in the MRP and is entered into the DOGM database in a timely manner. The monitoring plan was last updated in Fall of 2019.

adaniels

## Hydrologic Impoundments

### Analysis:

The midterm review of the MRP meets the State of Utah R645 requirements for Hydrologic Impoundments.

Plates depicting the 4 sediment ponds that can be found at the waste rock site (2), the Pace canyon facilities and the Dugout canyon facilities were reviewed and verified during the field visit associated with the midterm review on September 10, 2020. These Plates appeared to be accurate matched what was seen in the field. Ponds were dry during the time of the midterm site inspection. There are no updates required of these drawings. The current ponds appear to be the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area, are in good condition, and are functioning as designed

adaniels

## Reclamation Plan

### Topsoil and Subsoil

#### Analysis:

The Mining and Reclamation Plan does not meet the state of Utah R645 requirements for Soils: Redistribution Plan.

Overburden is currently being redistributed for use as substitute subsoil at the refuse site. The Division requests that it is analyzed for the parameters of Table 2, Table 3 and Table 7 of the Utah Guidelines for Topsoil and Overburden.

Refuse Amendment (RA) Volume Attachment 2-2 calculates the volume of soil to cover the refuse pile with 4 feet will be 117,403 CY, based on a disturbed footprint of 18.19 acres (adjusted for 2:1 slope). The total volume of topsoil and subsoil anticipated with Phase II expansion is 56,213 CY. The volume to be imported from the borrow area is 46,515 CY (RA Attach 2-2, p. 2). Borrow Area soils are described in RA Attachment 2-3.

However, the refuse Phase II expansion may create more subsoil cover than anticipated. During the mid-term inspection on September 10, 2020, the Division observed subsoil excavation West of sediment pond #2 to a depth of approximately 20 feet.

Leland Sasser, Soil Scientist with Environmental Industrial Services, Inc, conducted three soil surveys of the 4 acre expansion area (RA Attah. 2-1). Pits were excavated to five feet or to weathered shale, which in some instances was 2 – 4 feet below the surface (September 24, 2017). In an August 14, 2017 summary of the sediment pond soil survey, Leland Sasser, states that sites the soil appears good for reclamation to a depth of 80 inches (6.66 ft), with the exception of subsoil below the slick spots where the subsoil from 3-13 inch depth had unsuitable pH values of 9.4

When overburden is considered for use as substitute subsoil, the Division requests that it is analyzed for the parameters of Table 2, Table 3 and Table 7 of the Utah Guidelines for Topsoil and Overburden. Since the overburden below 80 inches is being used in the surface four feet of cover over the waste, the Division request that it is tested for these suitability characteristics. The Permittee should take 3 composite samples of the overburden which has already been redistributed over the refuse (beneath any placed topsoil) for analysis of suitability.

MRP Chapter 2, 3 and 5 describes reclamation of the mine site, Pace Canyon, the Gilson well, and the Soldier Canyon storage site.

RA Volume Chapter 2, 3 and 5 describe reclamation of the Refuse site.

MRP Degas Volume Chap 2, 3, and 5 describe reclamation of the degas pads. Degas gas well pad G11 is the one remaining active well pad site. MRP Degas Volume Attachment 2-4 outlines the stage of bond release for all other degas wells. Degas wells 3 and 4 have received Phase III bond release.

The soil borrow area and its reclamation is described in MRP RA Volume Attachment 2-3.

*Deficiencies Details:*

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

R645-301-553.252, Prior to seeding, and no later than November 30, 2020, the Permittee must take two composite samples of the overburden (either from the excavated pit or from the soil already placed on the reclaimed slope) for analysis of the parameters of Tables 2, Table 3 and Table 7 of the Division's Guidelines for Topsoil and Overburden.

pburton

## **Revegetation General Requirements**

*Analysis:*

The application meets the State of Utah R645-301-356 requirements for Revegetation General Requirements.

There are 10 total reference areas for the Dugout mine, the locations of which can be found on Plate 3-1E: one—a sagebrush/grass—for the waste rock site; two—a pinyon/juniper range site and a riparian range site—for the main mine facilities; one—a pinyon/juniper—for the Pace Canyon fan breakout; and six—a conifer/mtn. brush/PJ, a mtn. brush/conifer, a sagebrush/snowberry/grass, an aspen/maple/Douglas fir, a mtn. brush/snowberry, and a conifer/aspens—for various degas wells. Of these, only two were able to be visited during the inspection due to the spread out nature of the site and areas. The two that were visited were the Pace Canyon pinyon/juniper and the waste rock site's sagebrush/grass reference areas. Some of the degas reference areas were visited in 2017 as part of an inspection of the wells. The two that were inspected during the midterm inspection were observed to be in good shape with no offsite impacts. However, the Division has some recommendations to help improve the efficacy of the reference areas into the future. The Division recommends that GPS coordinate information be added to the MRP for each of the reference sites as well as signage added on the ground to identify the reference areas in the field.

tmiller

## **Bonding Determination of Amount**

*Analysis:*

The Midterm review has determined that the current reclamation bond does not satisfy the R645 requirements for the Determination of Bonding Amount.

A review of the reclamation bond has determined that the summary costs need to be updated to account for escalation. A 5-year escalation of 2.95% should be applied to the total reclamation bond cost to the year 2025. The Division is not

requiring that the Permittee increase the posted reclamation bond because the current bond amount appears adequate even after applying the 5-year escalation factor. The following is a summary of the reclamation costs:

The total direct costs amount to \$2,265,023, with almost half of this amount being earmarked for earthwork costs. Earthwork for the refuse pile amounts to over \$423,000, and over \$259,000 of that total is earmarked for the harvest and placement of borrow soils.

The current reclamation bond amounts to \$3,049,000, whereas the posted bond amounts to \$3,550,000. The Permittee is currently overbonded by \$501,000, although the application of a 5-year escalation factor will reduce that amount.

*Deficiencies Details:*

The Midterm review has determined that the current reclamation bond does not satisfy the R645 requirements for the Determination of Bonding Amount. The following deficiency must be addressed:

R645-301-830: The Permittee must update the summary costs worksheet by applying a 5-year escalation factor of 2.95% to the total reclamation bond cost. Costs should be escalated out to the year 2025, the date of the next Midterm review.