



State of Utah

DEPARTMENT OF NATURAL RESOURCES

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Division of Oil, Gas and Mining

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Division Director

August 18, 2015

Ken May, General Manager
Canyon Fuel Company, LLC
597 South SR24
Salina, Utah 84654

Subject: Waste Rock Site Expansion, Canyon Fuel Company, LLC, Sufco Mine,
C/041/0002, Task ID #4953

Dear Mr. May:

The Division has reviewed your application. The Division has identified deficiencies that must be addressed before final approval can be granted. The deficiencies are listed as an attachment to this letter.

The deficiencies authors are identified so that your staff can communicate directly with that individual should questions arise. The plans as submitted are denied. Please resubmit the entire application.

If you have any questions, please call me at (801) 538-5325.

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/sqs
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GARY R. HERBERT

Governor

GREG BELL

Lieutenant Governor

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0410002
TaskID: 4953
Mine Name: SUFCO MINE
Title: WASTE ROCK SITE EXPANSION

Environmental Resource Information

Soils Resource Information

Deficiencies Details:

R645-301-222.400, Include in the pre-disturbance soil survey information the nutrient status of the topsoil (N:P:K) and other soil planned for salvage (subsoil). Please refer to Table 3 of the Division's January 2008 Guidelines for Topsoil and Overburden.

pburton

Operation Plan

Mining Operations and Facilities

Deficiencies Details:

The application does not meet the minimum requirements of R645-301-528 due to lacking a narrative explaining the construction, modification, etc. of the proposed Coal Waste Rock Disposal keying into the existing Waste Rock pile specifically:

Maps 2A through 2E do not show the footprint of the corresponding Topsoil/subsoil pile as each phase proceeds. The only footprint that is displayed is the final configuration of the topsoil/subsoil pile on Map 2F. The Permittee will show or detail the topsoil/subsoil pile size as it will exist within the maximum disturbance at any given point of each phase to match the volumes shown in the tables on the top left of each corresponding map. See Figure 1 for example of minimum volume information that could be shown on each corresponding phase map to avoid misinformation. (Three phases text are shown on the single map just as an example.)

The application does not detail how the various sequential phases of the waste rock pile will be tied into the existing waste rock pile in the narrative or on Maps 2A through 2E. Maps 2A through 2E present confusing information as the maps do not show how the proposed waste rock pile will tie into the existing waste rock pile. Maps 2A through 2E, as shown, detail a channel between the existing and proposed waste rock piles as the topography abruptly ends before tying into the corresponding elevation on the existing waste rock pile. Based on the cross section detailed in Map 3A through 3C, the Division believes this is a simple error in the drawings representation of phase areas. The Permittee amend Maps 2A through 2E to show the proposed operational map key into existing contours on all sides.

Map 4A through 5E shows the approximate footprint area of each phase of the waste rock pile construction,

however, the maps do not detail the area to be worked in the corresponding existing waste rock pile to tie the contours together to achieve a final surface as represented in Map 8. Maps 4A through 5E will be edited to show the complete footprint of where waste rock will be placed including in the proposed waste rock pile and over the existing waste rock pile. See Figure 1 for an approximation of contours.

The majority of text meets the minimum requirements of R645-301-528 as Chapter 5 Section 528 was updated to include a narrative explaining the basic cycle of how the waste will be conveyed to the site of the Coal Waste Rock Disposal. The application details the general plans and construction of the proposed waste rock pile in Chapter 5 Section 530. The text describes how the waste rock pile site will have the foundation area prepared, stages of construction of the sequential phases 1 through 6 in the proposed waste rock areas and how the previous phase's area will be contemporaneously reclaimed.

cparker

Topsoil and Subsoil

Deficiencies Details:

R645-301-234, Section 234 Topsoil storage must provide a reference to the topsoil location map.

R645-301-234.230, Operation Plan Topsoil Pile Protection

- 1) The narrative states that topsoil that is expected to be stored for less than two years will not be revegetated. This statement does not meet with the topsoil handling rules. Please remove this statement. All topsoil will be protected through the establishment of vegetative cover (R645-301-234.230).
- 2) The narrative describes topsoil stockpile construction at the end of Section 231.100. The statements look like notes appended to The table preceding. Please call this information out with a heading.
- 3) The narrative describes separate topsoil and subsoil stockpiles, but the Maps 2A - 2F show a single stockpile. Please differentiate between subsoil and topsoil on the maps.
- 4) As recent inspection reports have noted, grazing animals have reduced establishment on stockpiles at the waste rock site. The narrative should describe protection of the soil stockpiles from grazing animals, especially during vegetation establishment. 3) Section 234.100 describes seeding the topsoil with the interim mix described in WRDS Chap 3 Section 341.200. This is a mix of grasses and forbes. Since yellow sweet clover has been removed, another nitrogen fixing legume should be added. The Division suggests Timp Utah Sweetvetch (*Hedysarum boreale*).

R645-301-231.100, Operation Plan

- 1) Describe the method of monitoring the distinction between topsoil and subsoil.
- 2) Describe record keeping for soil salvage volumes and its reporting in the annual report.
- 3) Describe record keeping for soil replacement volumes and its reporting in the annual report.

R645-301-231.400, Operation Plan Narrative

- 1) Please state whether the stockpile protection plan described in Section 234.100 includes surface roughening of the stockpile slopes during mulch application.
- 2) Section 234.200 refers to berms around the stockpiles and references Appendix VII (design drawing). This drawing could not be found with the application. Please provide the referenced drawing.
- 3) The use of mulch on soil stockpiles is now stated in the narrative. However, the amount to be applied per acre should also be stated, in addition to the method of application. Will there be 1 ton/ac incorporated with surface roughening, followed by 1,500 lbs wood fiber applied at seeding with tackifier?

pburton

Maps Affected Area

Deficiencies Details:

The application does not meet the minimum requirements of R645-301-521.100 through-521.130 by providing updated text and maps detailing the operational contours and grading plan for each phase of construction of the expanded waste rock site, specifically:

Maps 2A through 2E fail to show grading of the operational surface tying into the existing ground. The Permittee will show the total area where waste rock will be placed to achieve the final operational surface shown on Map 2F and Map 8 with cover placed.

Maps 4A through 4E also fail to show the full extent of the area where waste rock is to be placed if the final grade is to be

achieved as show in Map 8. The Permittee will edit the shaded areas shown on Map 4A through 4E to cover the entire area affected as requested in Maps 2A through 2E.
See 521 Operations for further details.

cparker

Reclamation Plan

Backfill and Grading General

Deficiencies Details:

The minimum requirements of R645-301-553 are not met within the application due to missing information presented in Maps 2A through 2E and Maps 4a through 4E. As detailed previously in section 521 and 542, said maps are missing information of how the proposed operational surface will be tied into the exiting waste rock pile and ground surface. The volume of total waste place is affected by this and is assumed by the Division at already be accounted for in the volumes estimated for the Chapter 8 but just missing from the above specified maps.

The text within Chapter 2, on page 2-4 and 2-5, details the various volumes of sub and top soil to be removed specific to each phase. Phase one soil type one likely contains a typo within the MRP text. Map 2A shows that 3484 CY of topsoil will be removed, while the table within Chapter 2 shows 3184 CY. The Map 2A is likely correct but should be verified that 3484 CY is indeed the volume of topsoil removal in Phase one and the corresponding tables or figures corrected throughout the application.

cparker

Topsoil and Subsoil

Deficiencies Details:

R645-301-121.100, Clear and Concise and R645-301-233.100 Topsoil substitutes and Supplements
In Section 234.100, 240, Section 242.100, Section 541 and 542.100 the term growth medium has been reduced to medium in response to the the Division's comment that there is ample topsoil and subsoil to provide the best available material in the permit area. Where it is used to reference topsoil and subsoil, please replace the word medium with topsoil/subsoil in the plan.

R645-301-242, Soil Redistribution

- 1) The application implies that less than four feet of cover will be required for final reclamation (Section 242.100 Contemporaneous Reclamation and Soil Thickness). If there is the potential for achieving success with less than four feet of cover, than it would be wise to make that case now, in order to reduce the amount of subsoil cover required to be salvaged and stockpiled. Otherwise, remove the ambiguity and clearly state that a combined depth of subsoil and topsoil cover equal to four feet will be applied to the waste at final reclamation.
- 2) Section 242.100 states that one foot of topsoil will be placed n 4.34 acres at the site during final reclamation. Please also state in the text the acreage that will receive 4 ft of cover in each Phase of reclamation.
- 3) Section 242.200 describes surface ripping of roads and perimeter ditches. this statement should indicate ripping on all operational areas surrounding the waste rock pile prior to soil redistribution, which in these locations will be only one foot deep.

R645-301-251, Soil Performance Standards

Map 8 appears to show a stockpile remaining after reclamation in the location of the operational topsoil/subsoil stockpile. The performance standards require that all topsoil and subsoil be redistributed on the site. There should be no soil remaining in a stockpile with steep slopes at final reclamation.

R645-301-244.100 Stabilization of exposed surface areas

The reader is referred to Chapter 5 for detailed discussion regarding soil protection during and after final reclamation. Chapter 5 is approximately 40 pages long. Please be more specific and provide a plan for stabilization of exposed areas during OPERATIONS.

R645-301-244.200 Suitable Mulch

The reader is referred to Chapter 5 for detailed discussion regarding soil protection during and after final reclamation. Chapter 5 is approximately 40 pages long. Please be more specific and describe the type of mulch, the rate of application, and the method of mulch application to be applied during RECLAMATION. One successful approach has been to apply 1 ton/ac straw with incorporation into the soil, followed by hydroseed and 1,500 lbs/ac wood fiber mulch with tackifier.

