



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

March 9, 2018

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

Subject: Conditional Approval of Waste Rock Site Expansion As-Built, Canyon Fuel Company, LLC, Dugout Canyon Mine, C/007/0039, Task #5612

Dear Mr. Tatton:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Please submit these copies by March 30, 2018. Once we receive these copies, final approval will be granted.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan.

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

Sincerely,

Daron R. Haddock
Coal Program Manager

DRH/sqs
O:\007039.DUG\WG5612 WRS AS BUILT\CONDITIONALAPPROVAL.DOC





GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0070039
TaskID: 5612
Mine Name: DUGOUT CANYON MINE
Title: WASTE ROCK SITE EXPANSION AS-BUILT

Operation Plan

Topsoil and Subsoil

Analysis:

The application meets the requirements of R645-301-230, Soil Operation Plan.

The application meets the requirements of the operation plan for topsoil handling, R645-301-230, because soil salvage for the Stage 1 of the Phase II Waste Rock expansion was conducted under the supervision of a soil scientist as described in MRP Chapter 2, Attachment 2-1. EIS Soil Sampling Projects reports have been included in RA Attachment 2-1. In these reports, Mr. Leland Sasser, EIS Certified Professional Soil Scientist, describes and maps the soil sampling of Map Unit H, conducted in the location of the pond construction (August 14, 2017) and of Map Unit J in the waste rock expansion (9/25/2017). Map Unit H topsoil and subsoils in the pond #2 location were placed in temporary stockpiles for use on the contemporaneous reclamation, except that subsoils with elevated pH values (natric horizon) were avoided. Map Unit J topsoil and subsoil from the South toe of the waste rock pile were live hauled and used in the contemporaneous reclamation on the North face of the waste rock site.

The Phase II expansion is not fully completed. This 1st stage of Phase 2 expansion disturbed only 2 additional acres (email from B. King, 2/27/2018). Therefore, the stockpile volumes described on RA Chap 2, p. 2-15 and shown on RA Plate 2-2, will not exist at the site until the final stage of Phase II expansion is completed (personal communication, Bill King, 2/27/2018). Likewise, the borrow area requirements (RA Attachment 2-2) reflect final volumes on site at the completion of the Phase II expansion. If the final stage of Phase II expansion is not completed by the mid-term review, which is scheduled for 2020, then stockpile volumes and information provided on RA Plate 2-2 and RA Attachment 2-2 will be brought up to date at that time.

pburton

Hydrologic Diversion General

Analysis:

The application meets the State of Utah R645 requirements for Hydrologic Diversions General.

The Permittee includes the as-built for culvert UC-3, including cross-section and map view. The culvert will run beneath the access road to sedimentation pond #2 conveying runoff from the refuse pile and from UC-1. The culvert was built according to the designed for 100 year- 6 hr storm event. The CMP culvert is 30.3 inches in length, 30" diameter, with a 3.9% grade. The calculations provided are for a minimum diameter culvert of 24" for a peak flow 2.91 cfs. The specifics are outlined in RA Appendix 7-4, Table 7-4 and RA Appendix 7-7- Table-6 and page 542. The as-built for UC-3 shows

the culvert as a 30 inch culvert, which will well exceed the minimum design requirements outlined in the MRP.

aumarva

Hydrologic Siltation Sedimentation

Analysis:

The application meets the State of Utah R645 requirements for Hydrologic Siltation Sedimentation.

The Permittee provides the as-built of sedimentation pond 2 in Plate 7-2b. The topography and cross-sections of the sedimentation pond are depicted in this figure. The as-built drawing and cross-section matches the proposed design specifics, presented in the Refuse Pile Amendment narrative beginning on Page 7-19. The sedimentation pond has been built as a total containment structure, with a sediment storage capacity of 0.68 acre feet. The maximum sediment level is 5862.87 feet. The 60% sediment clean-out volume of 0.41 acre-feet is 5861.45 feet. The pond is designed to fully contain runoff from a 100-year 24-hour precipitation event. There is no set detention time as the pond is a total containment structure, therefore, no principal spillways, dewatering, decant structures have been developed. If discharge from the pond is required, the collected water will be pumped, complying with the approved UPDES permit. The calculations for pond sizing are presented in RA Attachment 7-7.

aumarva

Maps Facilities

Analysis:

The amendment meets the State of Utah R645 requirements for Mining Facilities Maps.

R645-301-521, R645-301-526.220 - Permittee has included in this amendment several maps illustrating the logistics and configuration of various surface structures located on the waste rock site. In addition to the waste rock repository, plan view maps also show the locations of roads, drainage ditches, subsoil and topsoil stockpiles, and sedimentation ponds. Supplemental maps also illustrate cross-sectional views of the sedimentation ponds as well as their inflow channels, culverts, and spillways. All cross section maps have been stamped and signed by Jeffrey S. Erickson, Licensed Professional Engineer.

jeatchel

Maps Certification Requirements

Analysis:

The amendment meets the State of Utah R645 requirements for Maps Certification Requirements.

The cross section maps included in this amendment have been stamped and signed by Jeffrey S. Erickson, Licensed Professional Engineer number 313965-2202 registered in the State of Utah. This satisfies the requirements of R645-301-512.200, which require plans and engineering designs of impoundments to be certified by a qualified registered professional engineer.

jeatchel

Reclamation Plan

Topsoil and Subsoil

Analysis:

The application meets the requirements of R645-301-240 for the waste rock site, because 1.9 acres including a 0.65 acre demonstration test plot was contemporaneously reclaimed as described in the MRP Chapter 2. The location of the demonstration test plot is shown on RA Plate 2-2. At the completion of the Phase 2 expansion, a total 4.5 acres of the refuse pile will be contemporaneously reclaimed.

The contemporaneous waste rock reclamation includes a demonstration plot to support lesser cover over the waste in final reclamation (per R645-301-553.250). The demonstration or test plot soil cover is two feet of cover as described in RA Chap 2, page 2-14. The RA Chap 2 Attachment 2-1 January 16, 2018 Completion Report confirms the two feet test plot cover: the top six inches being topsoil, the next foot subsoil and the lower 6 - 8 inches being subsoil mixed with

refuse. This approach will be compared with four feet of cover over the adjacent area: the top six inches being topsoil and the next 3 feet subsoil and 6 inches mixed with six inches of waste to form the lower strata. The mixture of waste and subsoil is intentional, to avoid an abrupt change in compaction and texture which might be restricting to plant growth.

An application of Nutrimulch B-grade was made to the 1.9 acre (84,000 sq ft) contemporaneous reclamation area. Nutrimulch B-grade is fortified with biosolids and has an analysis of 3.26%N: 0.99% P: 1.25% K. The nutrimulch was applied at 150 CY/1.92 acres. According to Mr. King, the nutrimulch weighs approximately 700 lbs/CY, which calculates to an application rate of 27 tons/acre. This application was just over a ½ inch coverage depth (email from B. King on 1/10/2018).

pburton

Stabilization of Surface Areas

Analysis:

Stage 1 of the Phase 2 waste rock expansion meets the requirements of stabilization of surface areas, because the 1.9 acre contemporaneous reclamation area (including the 0.65 acre demonstration test plot area) was graded to 2h:1v contours (email from B. King, 2/27/2018, and Insp Rpt 5982, 10/17/2017); treated with nutrimulch (email from B. King, 2/10/2018); seeded in the first week of January 2018 (email with seed mix sent to file 1/3/2018); and covered with mulch blanket (RA Section 242.100 and Insp. Report 6047, 1/08/2018).

pburton