

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

September 29, 2003

TO: Internal File

THRU: Stephen J. Demczak, Environmental Scientist III/Engineering, Team Lead

FROM: Priscilla W. Burton, Environmental Scientist III/Soils

RE: South Fork Portals Reclamation, Canyon Fuel Company, LLC., Skyline Mine, C/007/005, Task ID #1663, 1699, and 1706.

SUMMARY:

The amendment to reclaim the South Fork Portals for Mine #1 was received August 29, 2003 (Task 1663) and supplemental information was received on September 15, 2003 (Task 1699) and September 19, 2003 (Task 1706). The information indicates that 1,300 Tons of waste will be hauled to the site to achieve AOC in reclamation of the portal. Pages 4-39a through 4-41 and pages 4-41(a – d) as well as page 4-50 have been modified. A copy of the missing MRP Drawing 3.2.11-1 was also provided.

The application includes analyses of the waste to be used as fill in Appendix A-2. The waste is non-acid/non-toxic forming according to the Division's 1988 Guidelines for Topsoil and Overburden. The lake sediments to be backfilled in the portals are also non-toxic, non-acid forming.

Reclamation Cross Sections South Fork Portals Dwg 4.6.5-1 shows the placement of waste against the three portals of the #1 Mine. MRP Map 2.2.7.7 shows the Mine #1 breakout portals in the South Fork of Eccles Creek. The MRP Mine #1 Portal Breakout map 3.2.11-1 shows the disturbed area associated with the South Fork break out portals. The acreage of disturbance is 0.96 acres (Table 4.7-7 of the MRP). An additional 0.06-acre area will serve as a truck turnout at the mouth of the South Fork of Eccles Creek. And 1.0 acre of road will be reclaimed from the access gate to the truck turnout. The total area to be impacted by portal closure is 2.02 acres.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

OPERATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-230.

Analysis:

Topsoil Removal and Storage

It is estimated that there will be 150 round trip truck trips up the canyon to transport the sediment from Electric Lake to be used in portal closure; two trips to transport blocks; and 100 trips to transport waste rock for fill (personal communication with Chris Hansen September 10, 2003).

Topsoil will be removed from the 0.06-acre flat area at the mouth of the South Fork of Eccles Creek that will be used as a passing area for transport trucks. The soil will be removed to a depth of twelve inches and stored (page 4-43). Soils on the roadway between the portals and the knob will be graded to eliminate existing water bars. The loose soil created by the grading will be cast aside and recovered as topdressing during reclamation of the roadway (personal communication with Chris Hansen on September 18, 2003). The subsoil is that stored along the roadway just downstream from the land bridge will be used as a roadway during transport of the fill and then used as cover over the waste rock during reclamation (page 4-42).

As required by Regulation R645-301-242 all salvaged and stockpiled soils will be redistributed within the permit area.

Findings:

The information provided is adequate for the topsoil and subsoil operation plan.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Refuse Piles

Section 4.16 of the MRP describes placement of underground development waste either in the mined out workings or at the Scofield Waste Rock site. Refuse that is transported to the Waste Rock site will be tested as outlined in Section 4.4.5 of the MRP. One sample will be taken for every 2,000 Tons hauled. There will be 450 cu yds of Electric Lake sediments that will be hauled to the site for backfill inside the portals (p 4-41). The chemical characteristics of the lake sediments are reported in Appendix A-2. The contractor will use a 12-yard truck and this translates to approximately 40 round trips over the ancillary road to haul lake sediments.

During a site visit on September 9, 2003, Mr. Doug Johnson indicated that waste to be used as fill was mined in 1994 and stored underground until now. The application includes analyses of the waste to be used as fill in Appendix A-2. The waste is non-acid/non-toxic forming according to the Division's 1988 Guidelines for Topsoil and Overburden. Even so, the Permittee has committed to covering the waste with five feet of substitute topsoil and topsoil (p 4-41a).

Findings:

The information provided meets the requirements of the Regulations.

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

Section 4.6.5 of the MRP describes the South Fork breakout and its reclamation. The three portals of Mine #1 shown on Mine #1 Portal Breakout, Map 3.2.11.1, will be reclaimed using 1,300 Tons of waste rock as fill underneath five feet of subsoil/topsoil (page 4-41 and Dwg 4.6.5-1).

TECHNICAL MEMO

Page 4-40 of the MRP details 2,840 cu yd topsoil and 2,840 cu yds subsoil were salvaged and stored on site. The Division calculates that there is 444 cu yds of topsoil stored along the road (600 ft x 4ft x 5 ft) upstream of the site. The remainder of the topsoil (2,400 cu yds) must be stored in the topsoil pile at the mouth of the canyon, downstream from the site. The Division calculates that there is approximately 2,066 cu yds of subsoil stored in the land bridge. The remainder of the subsoil is stored along the roadway just downstream from the land bridge.

The MRP in Table 4.7-7 indicates that the South Fork Breakout encompasses 0.96 acres. This includes the portal area and the road downstream to the topsoil pile and upstream to end of topsoil storage (personal communication with Chris Hansen on September 10, 2003). The ancillary road from the topsoil pile to the highway, including the truck turnout, accounts for another 1.06 acres to be reclaimed (page 4-41d).

The Division calculates that the area to receive five feet of cover on the south fork portal pad is approximately 0.2 acres. To cover the 0.2-acre area with five feet of subsoil/topsoil will require about 1,000 cu yds of subsoil (three foot depth) and 645 cu yds of topsoil (two foot depth). The Permittee has enough stored topsoil and subsoil to accomplish this task.

The truck turnout will be ripped (12 inches), and topsoil (12 inches) will be replaced, and then the entire site will be gouged (page 4-41c). All reclaimed areas will be pocked to a depth of about twelve inches, except the road from the access gate to the truck turnout that will be ripped and seeded only (pages 4-41a, b, c).

Terry R. Brotherson Excavating (Mount Pleasant) will conduct the work using twelve-yard (10 wheel) dump trucks to haul the waste. A Sumatomo 200 trackhoe and a 3 yd rubber tire front-end loader will also be used at the site. A D-6 dozer will be used to respread topsoil and a Case 580 backhoe will be used for utility work. Keith Zobell will oversee the topsoil/subsoil handling and revegetation work (personal communication with Doug Johnson on September 9, 2003).

The location of the topsoil storage area will be returned to the approximate original contour (page 4-41a) that was a foot trail (email communication from Tom Lloyd, U.S. Forest Service, September 11, 2003).

Findings:

The information provided meets the regulatory requirements for Topsoil/Subsoil Reclamation plan.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Reseeding and mulching at the South Fork Breakout is described on page 4-50. After topsoil redistribution, 2,000 lbs/ac straw mulch will be evenly scattered over the surface and then incorporated into the soil with gouging.

The truck turnaround will be ripped before being topsoiled and then gouged (one foot) and seeded. The remaining reclaimed ground will be gouged to a depth of one foot (page 4-41a - c). The access road from the gate to the truck turnaround will not be gouged, but will be ripped and seeded. Areas to be raked are those that cannot be reached by the equipment (p 4-41b and cover letter dated Sept. 19, 2003).

Table 4.7-4 and Table 4.7-5 for Aspen (portals) and spruce and fir (roadway) seed mixes will be used on the site, except that *Melilotus officianalis* will be omitted from both tables.

Gravel may be applied to roadways to a depth of three inches in select locations to minimize the offsite sediment transport (personal communication with Chris Hansen on September 10, 2003).

Findings:

The information provided meets the requirements of the Regulations.

MAPS, PLANS, AND CROSS SECTIONS OF RECLAMATION OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-323, -301-512, -301-521, -301-542, -301-632, -301-731.

Analysis:

Final Surface Configuration Maps

Reclamation Cross Sections South Fork Portals Dwg 4.6.5-1 was submitted with this application. The map shows the placement of waste against the three portals of the #1 Mine. Map 2.2.7.7 shows the Mine #1 breakout portals in the South Fork of Eccles Creek. The Mine #1 Portal Breakout, map 3.2.11-1 shows the 0.96 acre disturbed area of the South Fork break out portals. (A copy of Map 3.2.11-1 was provided with this application.)

TECHNICAL MEMO

The reclaimed slope will be a 2h:1v.

Reclamation Treatments Maps

A reclamation treatment map will be provided to the construction management team and the field inspector. This map will outline areas of ripping, gouging, raking, sediment control, topsoil placement depths, seeding treatments, and transplants.

Findings:

The information provided meets the requirements of the Regulations.

RECOMMENDATIONS:

The application is recommended for approval.