

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

January 26, 2006

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor

FROM: James D. Smith, Environmental Specialist

RE: Lease Addition U-46484, U-61048, & U-61049, Co-Op Mining Company, Bear Canyon Mine, C/015/0025, Task #2292

SUMMARY:

The proposed amendment adds parts of federal leases U-024316, U-46484, U-61048, and U 61049 and fee coal lands to the permit area.

	Acres
U-024316	60
U-46484	1,400
U-61048	1,108.27
U-61049	2,196.09
Fee	2,740.00
Total	7,504.36

After the Permittee completed the amendment, they received a letter from the Division outlining the proposed directory structure for electronic submittal. The Permittee commits to rearranging the electronic portion of the submittal to match Division guidelines and to resubmitting the CDs in the format recommended by the Division.

TECHNICAL ANALYSIS:

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GEOLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.22; R645-301-623, -301-724.

Analysis:

The MRP includes geologic information in sufficient detail to assist in determining the probable hydrologic consequences of the operation upon the quality and quantity of surface and ground water in the permit and adjacent areas, including the extent to which surface and ground-water monitoring is necessary, and determining whether reclamation as required by the Utah Coal Mining Rules can be accomplished, and whether the proposed operation has been designed to prevent material damage to the hydrologic balance outside the permit area.

The MRP includes a description of the areal and structural geology of the proposed permit and adjacent areas. The description is based on maps and plans required as resource information for the plan, detailed site-specific information, and geologic literature and practices. Additional geologic information has been submitted as part of Appendix 7J, Investigation of Groundwater and Surface Water Systems and Probable Hydrologic Consequences, a report by Mayo and Associates, LC. These descriptions show how areal and structural geology may affect the occurrence, availability, movement, quantity, and quality of potentially impacted surface and ground water.

The revised permit boundary is shown on updated Plates 6-1 thru 6-5 and 6-10 thru 6-16; Plates 6-6 through 6-9 have not been updated to show the revised permit boundary.

Revised Plates 5-1A and 5-1C show projected mining in the Blind Canyon and Tank seams, respectively. Plate 5-1B, projected mining in the Hiawatha Seam, has not been updated to show the new permit boundary. Although there the current submittal does not include a plan to mine this seam in this permit area extension, Plate 5-1B needs to be updated to show the new permit boundary.

Estimates of in-place and recoverable coal reserves for leases U-61048 and U-61049 have been added to Table 5-1; however, the tonnage for lease U-46484 are not in Table 5-1, the “Fee Land” tonnage has not been updated to include the new fee lands, and “Total Area” and “TOTAL” tonnages have not been updated.

Findings:

Information on geologic resources is not adequate to meet the requirements of this section. Prior to approval the Permittee must provide the following information, in accordance with:

R645-301-622, The Permittee must update Plates 6-6 through 6-9 to show the revised permit boundary.

R645-301-521.142, The Permittee must update Plate 5-1B to show the new permit boundary.

R645-300-133.100, 301-121.200, 522, The Permittee must:

- Update the “Total Area” and “TOTAL” tonnages in Table 5-1;
- Update the in-place and recoverable coal reserves for “Fee Land” in Table 5-1; and
- Add the in-place and recoverable coal reserves for lease U-46484 to Table 5-1.

HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Probable Hydrologic Consequences Determination

The probable hydrologic consequences determination is provided in Appendix 7-J. It was prepared by Mayo and Associates in 2001, but includes federal coal leases U-46484, U-61048, U-61049, and U-0243 16 and fee lands in the Mohrland area. Figure 2 in the PHC indicates the PHC did not include approximately 1,320 acres of fee land in Sec. 8, 16, and 21, T. 16 S., R. 8 E.; however, the narrative on page 1 of the PHC states that the “Bear Canyon Mine lease area, the Wild Horse Ridge area, the Mohrland area, and lands immediately adjacent to these areas comprise the area of study for this [PHC] investigation”, but it is not clear that Mayo and Associates’ investigation is adequate for the proposed permit area and adjacent areas. No new material has been added to Appendix 7-J for this amendment.

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Findings:

Information on hydrologic resources is not adequate to meet the requirements of this section. Prior to approval the Permittee must provide the following information, in accordance with:

R645-301-724.310, 728, The Permittee must provide a PHC determination for the entire proposed permit area and adjacent areas.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

Coal Resource and Geologic Information Maps

The revised permit boundary is shown on updated Plates 6-1 thru 6-5 and 6-10 thru 6-16; Plates 6-6 through 6-9 have not been updated to show the revised permit boundary.

Mine Workings Maps

Revised Plates 5-1A and 5-1C show projected mining in the Blind Canyon and Tank seams, respectively. Plate 5-1B, projected mining in the Hiawatha Seam, has not been updated to show the new permit boundary. Although there the current submittal does not include a plan to mine this seam in this permit area extension, Plate 5-1B needs to be updated to show the new permit boundary.

Findings:

Information provided in the application does not meet the requirements of this section of the regulations. See previous sections of this Tech Memo for a description of deficiencies that the Permittee must address.

OPERATION PLAN

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

Acid- and Toxic-Forming Materials and Underground Development Waste

Section 542.200 refers the reader to Appendix 5D and Appendix 6C for acid toxic information. Appendix 5D - Toxic Materials & Handling - provides limited information on the characteristics of soil, coal and sediment pond sludge through 1989. Appendix 6C - Coal & Rock Characteristics - has samples of roof and floor through 1995 and includes samples analyzed in January 2003 of roof, floor, coal and sediment pond clean out. The mine roof RM1 samples show that the coal has a pH of 3.7, no neutralization capacity and boron content of 10 ppm.

The Division has heard but cannot confirm that additional sampling for acid- and toxic-forming materials was conducted more recently, perhaps in 2004: if so, these newer data have not been added to Appendix 6C.

Water-Quality Standards And Effluent Limitations

A copy of the current UPDES permit, effective May 1, 2003, is included in Appendix 7-B.

Monitoring of the mine discharge will continue for the life of the mine (Appendix 7-Q). Potential contaminants from the abandoned equipment are identified in Appendix 7-Q, and copies of the MSDSs are in Appendix 7-Q. Water not consumed by culinary uses and mine operations is discharged to the stream in Bear Canyon under the UPDES permit.

Diversions: General

There are no new diversions associated with this amendment.

Stream Buffer Zones

There is no new surface disturbance associated with this amendment.

Sediment Control Measures

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There are no new sediment control measures associated with this amendment.

Siltation Structures: Other Treatment Facilities

No Other Treatment Facilities are proposed.

Siltation Structures: Exemptions

No exemption from siltation structures is proposed.

Discharge Structures

There are no new discharge structures associated with this amendment.

Impoundments

There are no impoundments associated with this amendment.

Casing and sealing of wells

No change to the plan for casing and sealing of wells is proposed. The existing plan is assumed to be adequate to handle this regulatory requirement.

Findings:

Information provided in the application is not adequate to meet the requirements of this section of the regulations.

R645-301-121.200, The Division understands that additional sampling for acid- and toxic-forming materials was conducted more recently, perhaps in 2004: if so, the Permittee needs to add these data to Appendix 6C.

RECOMMENDATIONS:

This amendment should not be approved until the Permittee has adequately addressed the deficiencies described in this Tech Memo.

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