

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 21, 2006

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor

FROM: James D. Smith, Environmental Scientist, Team Lead

RE: Loadout Expansion, Task # 2469, CO-OP Mining Company, Bear Canyon Mine, Permit C/015/0025

SUMMARY:

The proposed loadout expansion at the Bear Canyon Mine consists of adding a large retaining wall along part of the coal stacking area and extending the other side of the pad towards Bear Creek. This will widen the coal loading area and ease traffic flow. Maps and plans also have been updated to show the removal of several culverts and ditches, and diversion calculations are updated. The amendment was submitted as one hard copy and four CDs in Adobe[®].pdf format.

There are deficiencies that must be addressed before this amendment can be approved.

TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Appendix 5Q, Load – Out Expansion is being added to the MRP. It describes the following phases in the construction of the load-out expansion, which the Permittee states are to be done in five steps:

1. Remove old culverts
2. Install the small retaining wall next to the creek.
3. Earthwork
4. Install the large retaining wall next to the coal pad.
5. Install new culverts
6. Install concrete loading pads
7. Install Road
8. Extend the belts
9. Install Sampling Station.

Although the Permittee states these phases may be done concurrently or in a different order, it isn't clear how the Permittee has grouped these nine tasks into five steps.

Findings:

R645-301-121.200, The first page of Appendix 5Q states construction of the load-out expansion will take place in five steps, broken down into nine phases. The Permittee needs to clarify what the five steps are.

R645-301-121.200, The Permittee must correct the confusing spelling in Appendix 5Q, where "concrete" is spelled "concert" in the heading of the "Install concert [sic] loading pad" section and several times in the "Install new culverts" section.

OPERATION PLAN

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Analysis:

Mining Facilities Maps

Figure 1 in Appendix 5Q shows the new conveyor configuration, the widened load-out area, the concrete loading pads, and the pre-fab retaining wall by the coal-storage area. Plates 2-1A, 2-3C, 5-2C, 5-2D, 5-6C, 7-1C, 7-1D, and 7-5 have been updated for this amendment.

Plates 2-1A, 2-3C, 5-6C, 7-1C, and 7-5 still show the old conveyor configuration and need to be updated. 5-2C explicitly shows the new pre-fab retaining wall, while the position of this wall is marked by contour lines on other plates.

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Findings:

R645-301-121.200, -521.120, For Plate 5-2C, the Permittee must include in the map's LEGEND a description for the heavy black line running through the coal storage area.

R645-301-521.120, The Permittee must update Plates 2-1A, 2-3C, 5-6C, 7-1C, and 7-5 to show the new conveyor configuration.

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:

General

Figure 1 in Appendix 5Q is a schematic of the proposed loadout extension. To widen the load-out, the road edge will be extended approximately 3 to 4 ft towards the stream, and a retaining wall will be built to support this extension. Approximately 900 yd³ of material will be cut from the coal-storage side of the pad and a 150-ft by 3- to 12-ft retaining wall installed to support the cut.

Three concrete loading pads, 82 ft by 12 ft by 1 ft thick each, will be built under the loading hoppers. The remaining area will be covered with 4 in of asphalt and then the entire area is to be covered with superpave.

Diversions: Miscellaneous Flows

As outlined in Appendix 5Q, the load-out expansion will begin with removal of C-4D and C-5D, with D-3D extended to serve as a water bar across the shop access road and provide drainage control during construction. When the pad extension earthwork is complete, C-4D and C-5D will be reinstalled; their final locations are shown on Plate 7-1D. Five concrete drop-boxes with metal grates will be installed along C-5D to drain runoff from the pad; details of the boxes are shown in Figure 3. There will be a velocity arrestor at the outlet of C-5A. D-3D will be temporarily relocated against the new coal-storage cut during earthwork, but will be removed during final paving.

Several things in the Culvert Characteristics table beginning on page 7G-49 need to be clarified. The names of several of the culverts that have been reclaimed have been struck-out; the names need to be retained for the table to make sense. The new diameters (redline) for C-4D and C-5D appear to have been struck-out; the Permittee needs to assure these values carry over to the clean copy.

Reclaimed culvert C-7U needs to be removed from Plate 7-1C. Except for C-7U, reclaimed culverts and ditches have been removed from Plates 7-1C and 7-1D, and realigned undisturbed drainage boundaries are shown. Similar information needs to be updated on Plate 7-1E.

Table 7-24 needs to be updated because it indicates U-2B reports to D-19U. AU-2B has been combined with other undisturbed drainages and is no longer a designated drainage, and the table on page 7G-109 shows D-19U as reclaimed.

Ditches D-3D and D-5D are struck-out in the Ditch Characteristics table on page 7G-108, but the table does not indicate they have been reclaimed, and D-3D is still on Plate 7-1C.

Findings:

R645-301-742.300, There are discrepancies between Plate 7-1C, Tables 7-23 and 7-24, and several other pages and tables in the submittal. The Permittee must reconcile ambiguous or contradictory information on Plate 7-1C, Tables 7-23 and 7-24, and other pages and tables where needed. This includes but is **not** limited to the following discrepancies found by the Division, and the Permittee needs to check all related text, plans, maps, calculations, and tables for consistency and accuracy:

- AD-3A has been removed from Table 7-23, page 7G-3, 7G-6, 7G-9, and Plate 7-1C; however, Table 7-24 and the table on page 7G-108 show AD-3A reports to D-2D and D-6D, and the table on page 7G-51 shows it reports to C-5D and C-8D.
- AD-3B has been removed from Table 7-23, page 7G-3, 7G-6, 7G-10, and Plate 7-1C; however, Table 7-24 and the table on page 7G-108 show AD-3A reports to D-7D and D-10D, the table on page 7G-51 shows it reports to C-2D, and the table on page 7-G108 shows it reports to C-7D and D-10D.

R645-301-742.300, Information in the Culvert Characteristics table beginning on page 7G-49, the Ditch Characteristics table beginning on page 7G-108, Plates 7-1C, 7_1D, and 7-1E needs to be clarified.

- On Plate 7-1E, the Permittee needs to remove reclaimed culverts and ditches and show realigned undisturbed drainage boundaries.
- In the Culvert Characteristics table on page 7G-49, the names of culverts that are to be reclaimed have been struck-out; the Permittee needs to retain the names in the table for the table to make sense.

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- In the Culvert Characteristics (con't) table on page 7G-51, the new diameters (redline) for C-4D and C-5D appear to have been struck-out; the Permittee needs to assure that the new, correct diameters carry over to the final, clean copy.
- The Permittee needs to remove reclaimed culvert C-7U from Plate 7-1C.
- The Permittee needs to update Table 7-24 so it does not indicate U-2B reports to D-19U. AU-2B has been combined with other undisturbed drainages and is no longer a designated drainage, and the table on page 7G-109 shows D-19U as reclaimed.
- Ditches D-3D and D-5D are struck-out in the Ditch Characteristics table on page 7G-108, but the table does not indicate they are to be reclaimed, and D-3D is still shown on Plate 7-1C. The Permittee needs to clarify what the status of these ditches will be when the loadout expansion is completed.

R645-301-742.300, After the discrepancies in Plate 7-1C, Tables 7-23 and 7-24, and other pages and tables have been remedied, the Permittee must recalculate all affected hydrograph values and channel-sizing worksheets in Appendix 7G.

RECOMMENDATIONS:

The Loadout Expansion amendment cannot be approved until the deficiencies described above are addressed satisfactorily.