



State of Utah

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DIVISION OF OIL, GAS AND MINING

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TO: Pamela Grubaugh-Littig, Permit Supervisor

FROM: Jesse Kelley, Reclamation Engineer *JK*

RE: Review of Proposed Amendments to Mine Permit: 90-E (Cottonwood Creek Culvert Extension), 90-F (Coal Handling/Loadout Facility), 90-G (Ventilation Portal), 90-H (Bath House and Culinary Water System), 90-I (Relocation of Powder Magazines), 90-I (Text Changes to Reflect Amendments 90-E, 90-F, 90-G, and 90-H); Beaver Creek Coal Company, Trail Mountain #9 Mine, ACT/015/009, Folder #2, Emery County, Utah

Synopsis

On October 11, 1990, the Division received the proposed amendments listed above from Dan Guy of Beaver Creek Coal Company. This memorandum constitutes a review of these amendments.

Analysis

90-E Culvert Extension

This amendment involves the extension of the existing 66" main undisturbed culvert upstream for approximately 300 feet. This will allow for the expansion of the present parking and storage area. It will also prevent exposure of the stream channel to the mining operation.

Appendix 7-13 contains all design calculations, descriptions, operation and reclamation plans, and reclamation bond increase figures for the culvert extension. The culvert extension is shown as an integral part of the entire operation in Figure 7-11 (Drainage Control) and figure 7-22 (Proposed Culvert Extension Cross sections) shows transverse cross sections of the existing, proposed and final reclamation configurations of the extension area.

There are several problems with the Reclamation Bond Increase table which must be corrected:

- (1) For the sake of clarity, the heading of the 3rd column of the table should be "Cost/Man/Shift".
- (2) The figure in the 4th column (Labor Cost), 6th row (Earthwork) of the first page of the table should be \$240 rather than the present \$320. This changes the total cost (last column) for that row from the present \$2228 to \$2148.
- (3) The figure in the 4th column (Labor Cost), 3rd row (Containerized) of the second page of the table should be \$240 rather than the present \$120. This changes the total cost (last column) for that row from the present \$188 to \$308.
- (4) The preceding changes result in the following changes in total costs in the lower right-hand corner of the second page of the table:

(a) Subtotal	\$22,338
(b) 10.00%	2,234
(c) Total (1984 Dollars)	24,572
(d) 6.78% Inflation (5 Years)	9,538
(e) Total (1989 Dollars)	34,110
(f) 6.785 Inflation (5 Years)	13,242
(g) Total (1994 Dollars)	<u>\$47,352</u>
- (5) The operator must identify the source or sources of the man-shift costs and equipment-shift costs (columns 3 and 6, respectively) used in the calculations.

90-F Coal Handling/Loadout Facility

The amendment involves the construction of an entirely new coal handling/loadout system. Whereas with the existing system, coal is stockpiled on the ground and loaded into trucks by front end loader, with the proposed system, coal will be stored in a 600-ton capacity steel bin from which it will be loaded directly into

trucks. The only open-air storage of coal will be if the system's crusher circuit malfunctions and the coal is thus sent by way of the bypass conveyor to the ground storage pile.

The proposed system will make two large improvements in the overall operation. First, it will greatly expedite the handling and loading of coal by eliminating the cumbersome loading of trucks by front end loader. Second, it will improve the dust control situation by the use of covered conveyors and water-sprayed transfer points and by the elimination, in most cases, of open-air storage of coal.

Appendix 3-8 contains all relevant calculations, dimensions, descriptions, operational and reclamation procedures, and reclamation bond increase figures for the proposed system. In addition, the proposed system, including conveyors, coal storage bin, bypass conveyor and open-air stockpile area, are shown clearly in Figure 7-11 (Drainage Control).

The only deficiencies in the proposed amendment are in the Reclamation Bond Increase table. The operator must identify the source or sources of the man-shift costs and equipment-shift costs (columns 3 and 6, respectively) used in the calculations. Also, for the sake of clarity, the heading of the 3rd column of the table should be "Cost/Man/Shift".

90-G Ventilation Portal

This amendment involves the installation of a new ventilation portal approximately 1000 feet south of the existing fan portal. An old, existing road which once accessed a main sealed portal will also be regraded and provided with a berm in order to give access to the new portal.

The new ventilation portal is described and its operation and reclamation procedures outlined in Appendix 3-7. The portal, its attendant pad, and the access road are all shown in Figure 7-11 (Drainage Control).

On the second page of the Reclamation Bond Increase table, the last four figures in the lower right-hand corner are incorrect. This is so because, in the inflation

calculation for the first five-year period, a year was left out so that the total in 1989 dollars was calculated over only four years. The totals should be as follows:

(a) Subtotal	\$15,043
(b) 10.00% Contingency	1,504
(c) Total (1984 Dollars)	16,547
(d) 6.78% Inflation (5 Years)	6,424
(e) Total (1989 Dollars)	22,971
(f) 6.78% Inflation (5 Years)	8,917
(g) Total (1994 Dollars)	<u>\$31,888</u>

90-H Bath House and Culinary Water System

This amendment involves the relocation of a bath house and water tanks from the Gordon Creek #2, #7, & #8 Mine to the Trail Mountain #9 Mine. The bath house and water tanks will be installed on the pad created by the new culvert extension (see Amendment 90-E), to the north of the existing mine office complex. The resulting increase in culinary water and bath house capacity is necessary to accommodate the employees who will be coming to the Trail Mountain #9 Mine from the Gordon Creek #2, #7, & #8 Mine, which is scheduled to close in October or November of this year.

The bath house and culinary water system, with their operation and reclamation plans, are completely and adequately described in Appendix 3-9. Their new location is shown in Figure 7-11 (Drainage Control).

The only deficiencies in the proposed amendment are in the Reclamation Bond Increase table. The operator must identify the source or sources of the man-shift costs and equipment-shift costs (column 3 and 6, respectively) used in the calculations. Also, the heading of the 3rd column of the table should be "Cost/Man/Shift".

90-H Relocation of Powder Magazines

This amendment involves the simple relocation of two powder magazines. At present, the magazines are located near the mine office complex. It is proposed in this amendment that the magazines be moved to a more remote site in a wide portion of the new ventilation portal access road (see Amendment 90-G).

The relocation of the powder magazines is necessary because of the enlarging of the office complex/bath house pad due to the culvert extension (see Amendment 90-E). The placement of the powder magazines in the proposed location will make for greater safety because the proposed location is more remote and is visited by mine personnel comparatively rarely.

Since the powder magazines will be relocated within the disturbed area, the only additional reclamation cost associated with them will be their demolition. This cost is calculated in the Surety Bond Estimate, Table 3-3, page 3-64 of the mine plan.

90-I Text Changes to Reflect Amendments 90-E, 90-F, 90-G and 90-H

This amendment includes all the changes in text, maps, and drawings necessitated by the addition of Amendments 90-E, 90-F, 90-G and 90-H to the mining plan.

All of the new facilities and surface features are shown in Figures 3-1, 7-11 and 7-13A, all of which are included in Amendment 90-I. Also, shown in this amendment are the altered buffer zone boundaries (Figure 10-3), areas where contemporaneous reclamation will occur (Figure 3-16), and the final reclamation surface configuration (Figures 3-12 and 3-12A).

The text, figures, and maps are all internally consistent and consistent with the text, figures and maps of the proposed amendments. There are, however, several problems in the Surety Bond Estimate (Table 3-3) and the Reclamation Cost Breakdown (Table 3-4) that need to be corrected. The following is a list of these problems:

- (1) Table 3-4 (Reclamation Cost Breakdown) must be revised to reflect the changes made in the other amendments.
- (2) The Figure in column 4 (Labor Cost), line 8 (Water and Fuel System) of Table 3-3 (page 3-62) should be \$640 rather than the present \$320. This results in a total cost (column 8) for that line of \$1090, instead of the present total of \$1540.

- (3) The figures in column 4 (Labor Cost), lines 17, 18, and 19 (Bin) of Table 3-3 (page 3-62) should be, respectively, \$2400, \$2400, and \$3600 rather than the present respective figures of \$480, \$480, and \$360.
- (4) The figure in column 8 (Total Labor, Materials, Equipment), line 9 (Scale and Scale House) of Table 3-3 (page 3-62A) should be \$480 rather than the present \$120.
- (5) The figure in column 4 (Labor Cost), line 15 (Trash Removal) of Table 3-3 (page 3-64) should be \$240 rather than the present \$3600.
- (6) The subtotal for page 3-64 of Table 3-3 should be \$187,469 rather than the present \$187,559.
- (7) The figure in column 8 (Total Labor, Material, Equipment), line 16 (Containerized) of Table 3-3 (page 3-65) should be \$1414 rather than the present \$720.
- (8) The subtotal for page 3-65 of Table 3-3 should be \$54,289 rather than the present \$53,595.
- (9) The total on page 3-66 should be \$312,678 rather than the present \$312,074.
- (10) The figures and text in the lower right-hand corner of page 3-66 should be changed to read as follows:

(a) Contingency Fee (15%)	\$46,902
(b) Contracting Fee (2%)	6,254
(c) Total Cost (1984 Dollars)	\$365,834
(d) Total Cost (1989 Dollars, 6.78% inflation)	\$507,848
(e) Total Cost (1994 Dollars, 6.78% inflation)	\$704,990