

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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August 16, 2004

OK

TO: Internal File

FROM: James D. Smith, Environmental Specialist DS

RE: Culvert Removal, CO-OP Mining Company, Bear Canyon Mine, C/015/0025  
Task ID #1988

**SUMMARY:**

CO-OP Mining submitted this proposed amendment on August 4, 2004. It involves changes to the Company Officers and Directors, removal of a culvert, and enlarging of a ditch.

**TECHNICAL MEMO**

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**TECHNICAL ANALYSIS:**

**GENERAL CONTENTS**

**IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

**Analysis:**

Effective 07/01/2004, C. W. Reynolds became Vice President of C. W. Mining and Mine Manager, replacing, respectively, J. A. Gustafson and Wendell Owen.

Charles Reynolds has replaced Wendell Owen as the Resident Agent.

**Findings:**

Identification of Interests information in the mine plan is sufficient to meet the requirements of the Coal Mining Rules.

**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:**

**Diversions: General**

Culvert C-37U has been abandoned in place, as shown in revised Table 7.2-11 and the table on page 7G-48. The culvert carried runoff from watershed AU-21 under the road to the Tank Seam Portal. Runoff from AU-21 is now combined with runoff from watershed AU-26 and the road, and flows alongside the road in combined ditches D-37U and D38U, which effectively are now a single ditch.

The parameters for ditch D-37U have been recalculated, using FlowMaster software. A copy of the FlowMaster printout is included to replace page 7G-187; however, the new page is not numbered. Calculations are summarized in Table 7.2-10. Peak flow (Q) input is now 1.25 cfs (more than a 10-fold increase from the 0.10 cfs used previously) because of the abandonment of culvert C-37U. Other input parameters remain unchanged. Among the new values calculated, depth has increased from 0.2 to 0.52 foot, and critical depth from 0.23 to 0.63 foot.

As-built dimension of ditch D-37U have been increased from 1 foot wide by 0.5 foot deep to 1.4 feet wide and 0.7 foot deep, as shown in the revised table on page 7G-100. This leaves 0.18 foot of freeboard above calculated depth and only 0.07 foot of freeboard above critical depth: this is less than ideal and the smallest freeboard for any ditch at this mine, but the surface of the road itself is sloped in towards the ditch, so this minimal freeboard should be sufficient to prevent uncontrolled drainage over the roadway (from a 10-year, 6-hour storm event).

**Findings:**

**R645-301-121.200**, The page number is needed on the FlowMaster printout submitted to replace page 7G-187.

**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**

Locations of the powder magazine and the cap magazine have been added to Plate 2-4F.

Culvert C-37U has been abandoned in-place and flow is now continuous from ditch D37-U into ditch D-38U. To minimize confusion, especially during inspections, Plate 7-1G needs to be updated to show that culvert C37-U has been abandoned in-place and that ditches D-37U and D-38U are now effectively a single ditch.

**Certification Requirements**

Under R645-301-512.120 and R645-301-512.167, explosive storage and handling facilities are to be shown on a certified map. The updated Plate 2-4F is not certified.

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**Findings:**

**R645-301-121.200, -731.710,** To minimize confusion and facilitate inspection, Plate 7-1G needs to show that culvert C-37U has been abandoned in-place and that ditches D-37U and D-38U are now effectively a single, continuous ditch.

**R645-301-512.120, -521.167, -731.720,** Updated Plate 2-4F needs to be certified. When updated, Plate 7-1G will need to be certified.

**RECOMMENDATIONS:**

Additional information is needed to meet the requirements of the Coal Mining Rules. The proposed amendment should not be approved until the deficiencies identified in this Technical Memo have been addressed satisfactorily.