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# TECHNICAL MEMORANDUM

## Utah Coal Regulatory Program

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November 22, 2010

TO: Internal File

THRU: Joe Helfrich, Lead *JCH 12/1*  
Jim Smith, Permit Supervisor *JS 2 Dec 2010*

FROM: April A. Abate, Environmental Scientist II *AAA 12-6-2010*

RE: Abatement of NOV #10068, Castle Valley Mining LLC, Bear Canyon Mine, C/015/0025, Task ID #3662, Outgoing File

### SUMMARY:

On October 14, 2010, the Division of Oil, Gas and Mining (the Division) received an amendment from Castle Valley Mining LLC (the Permittee). The amendment provides revised surface facility maps, tables and design calculations for a diversion ditch D-8D, culvert C-14D and a concrete valve box designed to house the controls for the culinary water system at the Bear Canyon Mine.

On September 22, 2010, the Division issued a Notice of Violation (NOV #10068) citing the Permittee's failure to submit an amendment or obtain prior approval from the Division to construct these features.

The design information submitted by the Permittee (relative to the construction of disturbed drainage ditch D-8D) meets the peak runoff criteria for a 10 year/ 6 hour precipitation event specified for permanent diversion structures to contain miscellaneous flows as outlined in R645.301-742.330.

The following deficiencies need to be corrected prior to the approval of this amendment:

**[R645-301.521]:** Surface Facilities Map, Plate 5-2C: There are lines labeled as -o-, which are not labeled on the map legend and it is not clear what they are meant to represent. Furthermore, there are lines denoted as -F-, presumably fuel lines originating from the fuel tanks, but those are not marked on the legend. The haul roads on these maps are also a little difficult to follow since there are contour lines between the boundary lines of the roads. The roads on the maps would be more readable if these contour lines were removed from between the road boundaries.

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[R645-301-526, -301-528]: On page 5A-2 that was submitted, the first sentence mentions that reclamation is expected in 2012, implying that all the structures listed on Table 5A-1 will be removed in 2012. If this statement is incorrect, it should be removed from the plan.

**TECHNICAL ANALYSIS:**

**PUBLIC NOTICE AND COMMENT**

Regulatory References: R645-300-100.121; R645-303-200.227

**Analysis:**

A public notice was submitted as part of the permit amendment discussing the structural revisions being made to the plan.

**Findings:**

A public notice is not necessary when submitting a permit amendment. A public notice is only necessary when the applicant is submitting a new permit application or a significant revision to their permit.

**OPERATION PLAN**

**MINING OPERATIONS AND FACILITIES**

Regulatory Reference: 30 CFR 784.2, 784.11; R645-301-231, -301-526, -301-528.

**Analysis:**

The Permittee submitted an updated Table 5A-1 including the culinary water supply valve box being added to the list in September 2010.

**Findings:**

On page 5A-2 that was submitted, the first sentence mentions that reclamation is expected in 2012, implying that all the structures listed on Table 5A-1 will be removed in 2012. If this statement is incorrect, it should be removed from the 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, -300-148, -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: Miscellaneous Flows**

The Permittee has submitted an updated Table 7-24 Summary of Diversion Ditch Calculations on page 7-113. The design dimensions for the sizing of drainage ditch D-8D has been included in the table. The Permittee also submitted an updated Table 7-25 Culvert Characteristics to include culvert C-14D, which drains into Sediment Pond "B" on the site. Calculations for both Culvert C-14D and Diversion Ditch D-8D were included as part of the application.

The Permittee discovered that a water bar known as D-8D originally discussed in the MRP was never installed at the site. As a result, the Permittee removed all language discussing this water bar from page 7-136 in the MRP.

Disturbed drainage ditch D-8D has been sized to handle a maximum discharge of 1.23 cubic feet per second. A 10-year/6-hour storm event in this area is 1.5 inches. As ditch D-8D is a permanent diversion of miscellaneous flows, the performance standard required by the State of Utah R645-Coal Mining Rules is a 10-year/6-hour storm event. As a result, ditch D-8D is oversized.

### Findings:

The amendment meets the Diversions: Miscellaneous Flow requirements as required by the State of Utah R645-Coal Mining Rules.

## 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:

#### **Surface Facilities Maps**

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Updated Surface Facilities Map Plates 5-2B and 5-2C were submitted as part of the application package. The concrete valve box is labeled on Plate 5-2C. There are several water lines depicted on the map originating from the water tank and labeled as such. However, there are also lines labeled as -o-, which are not labeled on the map and it is not clear what they are meant to represent. Furthermore, there are lines denoted as -F-, presumably fuel lines originating from the fuel tanks, but those are not marked on the legend. The haul roads on these maps are also a little difficult to follow since there are contour lines between the boundary lines of the roads. The roads on the maps would be more readable if these contour lines were removed from between the road boundaries.

**Hydrology Maps**

Hydrology Maps Plates 7-1B and 7-1C were also updated to depict the locations of drainage diversion ditch D-8D and culvert C-14D.

**Sediment Pond "B" Maps**

An updated Sediment Pond "B" detail drawing, Plate 7-3 was submitted to show culvert C-14D entering into the pond from the east bank.

**Watershed Maps**

An updated Watershed Map, Plate 7-5 was included to show all the micro watersheds that drain both the disturbed areas as well as the undisturbed areas.

**Findings:**

Minor edits to the Surface Facilities Map, Plate 5-C need to be made: There are lines labeled as -o-, which are not labeled on the map legend and it is not clear what they are meant to represent. Furthermore, there are lines denoted as -F-, presumably fuel lines originating from the fuel tanks, but those are not marked on the legend. The haul roads on these maps are also a little difficult to follow since there are contour lines that between the boundary lines of the roads. The roads on the maps would be more readable if these contour lines were removed from between the road boundaries.

**RECOMMENDATIONS:**

The amendment is not recommended for approval.