



## Technical Analysis and Findings

### Utah Coal Regulatory Program

November 10, 2016

**PID:** C0070013  
**TaskID:** 5304  
**Mine Name:** HORSE CANYON MINE  
**Title:** POND 1 CULVERT

### Operation Plan

#### Mining Operations and Facilities

*Analysis:*

The amendment now meets all the State of Utah R645 requirements for Mining Operations and Facilities.

The amendment now meets the requirements of R645-301-512.120,512.200, -542.800, and -553 by the Plate 7-6a for the proposed changes in operations. The amendment is due to recent major storms and associated flooding, the existing undisturbed culvert designated UC-1, running below Sediment Pond 1, has become plugged. The Permittee determined that blockage and debris in the existing culvert is extensive and that removing the blockage and debris would be an enormous undertaking. It has been determined that replacing the culvert will be a safer and more cost-effective solution than cleaning out the debris from the existing culvert.

The Permittee instead proposes to install a new 60" diameter culvert, beginning at the existing inlet location and extending below Pond 1, then attaching to the existing 60" diameter culvert near the existing spillway structures. The existing plugged culvert would be cut and removed as necessary for the installation of the new culvert, then sealed and abandoned. The abandoned portion of the existing culvert would remain in-place until final reclamation. Upon final reclamation, the abandoned and new culvert sections will be removed in accordance with the approved reclamation plan.

Prior to and during construction, drainage that would typically go through the plugged culvert will be diverted around the construction zone and discharge in the same location as it is now, on the west side of the pond's dam. This will keep the area dry and safe for workers. Upon completion of the new culvert sections, the diversion will be removed and the drainage will resume through the 60 inch culvert as shown on the approved MRP maps.

The Permittee will provide certified as-built drawing upon completion of the new culvert sections. The as-built documentation will include documentation showing that the places embankments meet the original engineering designs in regards to compaction certification per R645-301-533.110.

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#### Hydrologic Diversion General

*Analysis:*

The amendment does not meet the State of Utah R645 requirements for diversions.

The amendment proposes to insert a section of culvert adjacent to the blocked bypass culvert running underneath Pond 1.

The sizing of the new section of culvert is okay. It does not change inlets or outlets and is the same diameter as the old culvert. The amendment proposes this construction in the cover letter, however this text must be added to the text in the MRP.

*Deficiencies Details:*

The amendment outlines the installation of the bypass culvert under Pond 1 in the cover letter. This narrative must be added to the MRP where diversions are discussed in the hydrology section in order to document work at the site.

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## **Reclamation Plan**

### **Bonding Determination of Amount**

*Analysis:*

The amendment does not meet the State of Utah R645 requirements for Determination of Bond Amount.

The amendment does not meet the requirements of R645-301-830.140 as the Permittee did provide detailed bond information but the sheets contained within the amendment do not appear to be for the Horse Canyon mine. The permittee must add the relevant additional bond information to the correct Horse Canyon demolition and earthwork sheets.

*Deficiencies Details:*

R645-301-843.140: The Permittee must provide the correct Horse Canyon mine sheets showing the updated information regarding the amendment.

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