

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

December 10, 2004

OK

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor *WH*

FROM: James D. Smith, Environmental Specialist *DS*

RE: Lead monitoring at site SBC-9A, Co-Op Mining Company, Bear Canyon Mine, C/015/0025, Task #2081

SUMMARY:

On January 14, 2003, a 130 ft x 20 ft x 20 ft roof fall in the 1st North section of the Bear Canyon #1 Mine (Hiawatha seam) buried a battery-powered coal hauler, an electrical distribution box, and a shop trailer. After MSHA and the Permittee investigated the roof fall, all remaining equipment was removed from the section and the area was sealed with MSHA approved mine seals.

The permittee notified the Division concerning the incident on January 15, 2003 during the regular monthly inspection. An amendment was submitted for the abandonment of waste underground, i.e., the mining equipment.

Permittee's Action		DOGM's Action	
Amendment submitted	05/14/2003	TA - Task # 1254	06/23/2003
Response to TA	09/10/2003	TA - Task # 1696	12/11/2003
Response to TA (Final)	05/03/2004	TA - Task # 1934 (Final)	09/03/2004

In a letter dated June 4, 2004, Darrel B. Leamaster, District Manager for the Castle Valley Special Service District (CVSSD), notified the Division that they had written the EPA to express concerns about the abandoned equipment. Of particular concern was the 8,768 lbs of lead in the batteries and its proximity to Big Bear Spring. On August 4, 2004, the Division met with representatives of CVSSD and other water users, the Division of Drinking Water (DDW), and the Permittee to discuss this and related issues.

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As result of that meeting and further consideration of potential problems with water quality - for both the mine and other water users, the Division concluded that the Bear Canyon Mine water-monitoring plan needed to be amended. In a letter dated August 27, 2004, the Division requested that Bear Canyon Mine amend the MRP to add quarterly analysis for lead and copper for water samples from SBC-9A (#1 Mine Portal pipe discharge from the Hiawatha Seam) and SBC-4 (Big Bear Spring). The amendment was also to include a written description of the installation of a 6-inch diameter pipeline along the mine floor to continuously drain ground-water inflow from the area of the abandoned mine equipment, and appropriate as-built drawings to show the location and routing of the pipeline and a typical cross-section of the cribbed pipeline installation. The Permittee addressed most of these issues in the amendment received November 26, 2004, but there is one deficiency that needs to be resolved before this amendment is approved.

TECHNICAL ANALYSIS:

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:

General

The amendment includes a written description of the installation of the 6-inch diameter polypropylene pipeline that continuously drains ground water from the area of the abandoned mine equipment. Plate 7-10B shows the location and routing of the pipeline. Figure 7P-1 is a typical cross-section of the cribbed pipeline installation.

Groundwater Monitoring

Lead has been included in the potential contaminants listed on page 7P-2, and added to Table 7.1-7 (Ground Water Quality Parameter List) for site SBC-9A, but not SBC-4. The modified text on page 7-29 states that if monitoring at SBC-9A stops or if the monitoring shows impacts, SBC-4 will then be monitored for lead. The Division specified additional monitoring at SBC-4 because of clear and reasonable concerns from the water users regarding potential impacts to this domestic water supply.

At the meeting in August, Kate Johnson of DDW stated that distribution systems need to be wary of lead and copper. Based on Ms. Johnson's remark, the Division's August 2004 letter requested that both lead and copper be added to the mine's monitoring plan, but in this amendment the Permittee has not added copper to the ground-water quality parameter list.

The Bear Canyon and CVSSD water systems are required by DDW to analyze for a number of parameters, including lead and copper, although less frequently than quarterly. As far as is known to the Division, there is no significant source for copper inside the mine or in the water system before it reaches SBC-9A. Therefore the Division no longer sees a benefit or productive purpose in quarterly monitoring for copper at SBC-9A and SBC-4 and is dropping, for the time being, the request for monitoring of this parameter. However, the Division emphasizes that the issue of monitoring for copper can be reopened if new information indicates that monitoring of this parameter at SBC-9A and SBC-4 is necessary.

Findings:

R645-301-731, Because there are clear concerns regarding potential impacts from 8,768 lbs of lead in the batteries abandoned near the protection zone for Big Bear Spring, the Permittee needs to monitor SBC-4 quarterly for dissolved lead.

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:

Mine Workings Maps

Plate 7-10B shows the location of the 6-inch polyethylene pipe that drains the area of the roof fall and carries the water through the sealed entry and to the flow meter outside the mine. The map is certified by a PE. Figure 7P-1 on page 7P-3 shows a typical cross section of the pipe installation.

Monitoring and Sampling Location Maps

Monitoring location SBC-9A is shown on Plate 7-10B.

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Findings:

Information on Maps, Plans, And Cross Sections Of Mining Operations is sufficient to meet the requirements of the R645 Coal Rules.

RECOMMENDATIONS:

This amendment should not be approved until monitoring for lead at SBC-4 is added to the monitoring plan.

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