

# TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

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September 13, 2006

TO: Internal File

THRU: Wayne Hedberg, Permit Supervisor *WH*  
Pete Hess, Team Lead

FROM: James D. Smith, Environmental Scientist III *DS*

RE: Wild Horse Ridge Tank Seam As-built/Snow Storage, Task ID #2588, CO-OP Mining Company, Bear Canyon Mine, Permit C/015/0025

## SUMMARY:

This amendment has been submitted to mitigate violation N06-46-2-2. The violation was issued, in part, for failure to design adequate drainage controls, snow storage areas, and runoff treatments for snow melt for the #3 Mine primary access road.

As-built information on other ditches and culverts was included in this amendment. In order to expedite processing of the snow storage NOV, the Permittee is being asked to resubmit as a separate amendment the sections of this amendment that do not deal directly with the NOV.

## 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, -300-148, -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

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Snow storage areas, BTCA H - Areas 1 through 8, are shown on Plates 7-1B, 7-1F and 7-1G. They are described on pages 7K-12A and 7K-12B. The Permittee used 30 inches as the average snow pack. Determining the volume of snow to be stored required several assumptions, which are described. (The table on page 7K-12B gives rectangular dimensions for these areas; however, Plates 7-1B, -1F, and -1G show most of the areas have irregular shapes. In a phone call on September 12, 2006, Mark Reynolds stated that the dimensions used in the calculations were based on the square-footage of the areas as determined from the AutoCAD drawings.) The Permittee's determination of the capacity of the snow storage areas indicates they are adequate for the expected snow volume, with additional volume available if needed. Because of the unknowns and assumptions used in approximating the volume of snow and the storage capacity, the Permittee states that projected storage capacity might be exceeded. (The Division also estimated storage capacity and the results indicate less storage capacity than the Permittee's estimate.) However, in the event that any area reaches 90% of its design capacity, the Permittee has committed to hire a contractor to haul the snow from the area and dispose of it.

The plan states on page 7K-12A that a slope of 45% was used to calculate the capacity, but in the September 12 phone call Mark indicated this was 45° or 100%, not 45%. The text needs to be corrected.

Area 2 is planned to store snow from the #3 Mine access road between the WHR turnoff and the bin. The proposed plan states on page 7K-12 that a silt fence placed in front of culvert C-22U will treat Area 2. However, Plate 7-1F shows drainage from Area 2 cannot report to C-22U but will drain directly to the stream, with perhaps a small amount flowing across Primary Conveyor Access Road # 1 and into to Catch Basin 1.

In a phone call (September 11, 2006), Mark Reynolds stated that Area 2 is not as shown on Plate 7-1F but is actually a wide, relatively flat shoulder on the Primary Mine # 3 Access Road. A berm along the conveyor separates it from the creek. Mark conceded that snowmelt from Area 2 would not flow to C-22U without being directed across the main road, which would probably cause problems. Mark will investigate other ways of treating the snowmelt from Area 2. The snowmelt could possibly be directed through the conveyor tunnel under Primary Conveyor Access Road # 1 and into Catch Basin 1, but the Permittee needs to determine if the basin is large enough to hold this additional volume of water. Plate 7-1F needs to be updated to show Area 2 more accurately, and the Permittee needs a feasible plan to treat the snowmelt from this area.

A silt fence placed at the outlet of ditch D-37U will treat snowmelt from Area 7, which stores snow from the road from the WHR Tanks Seam turnoff to the last switchback below the #4 pad. Plate 7-1G shows D-37U ending before reaching Area 7, but the ditch does actually extend far enough. Plate 7-1G needs to be modified to show the full length of D-37U. This was discussed in the September 11 phone call.

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**Findings:**

Hydrologic Information is not sufficient to meet the requirements of the Coal Mining Rules. Before the Division can approve this amendment, the Permittee needs to provide the following in accordance with:

- R645-301-722.500**, Plate 7-1F needs to be corrected to more accurately show the topography in and surrounding Area 2. Also:
- The Permittee needs a feasible plan to treat the snowmelt from Area 2.
  - If the snowmelt from Area 2 is to be directed through the conveyor tunnel and into Catch Basin 1, the Permittee needs to determine if that basin is large enough to hold the additional volume of water.
- R645-301-722.200**, A silt fence placed at the outlet of ditch D-37U will treat snowmelt from Area 7. Plate 7-1G shows D-37U ending before reaching Area 7, but the ditch actually does extend far enough to receive snowmelt from Area 7. The Permittee needs to modify Plate 7-1G to show the full length of D-37U.
- R645-301-121.200**, The plan states on page 7K-12A that a slope of 45% was used to calculate the capacity of the snow storage areas, but in the September 12 phone call Mark indicated this was 45° or 100%, not 45%. The Permittee needs to clarify the text in the proposed amendment regarding the slope angle used to estimate the volume of the snow storage areas.
- R645-301-121.300**, The Permittee must resubmit as-built information not pertinent to violation N06-46-2-2 as a separate amendment.

**RECOMMENDATIONS:**

The MRP cannot be approved until the deficiencies described above are addressed satisfactorily. As-built information on watersheds, ditches, and culverts not pertinent to violation N06-46-2-2 needs to be resubmitted as a separate amendment.