



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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March 1, 1995

TO: Daron Haddock

From: David W. Darby, Reclamation Hydrologist

RE: Surface Subsidence, NOV# 94-46-4-1B, Bear Canyon Mine, Co-Op Mining Company, ACT/015/025, File folder #2 and #5, Carbon County, Utah

Synopsis

The abatement plan for NOV # 94-46-4-1B was resubmitted to the Division on April 6, 1995. The changes in this submittal reflect changes requested by DOGM in the technical review conducted January 18, 1995 by Thomas Munson.

Analysis

The abatement plan addresses the methods the applicant intends to use to mitigate the impacts from subsidence near some breakout portals in a remote location in a side drainage of Huntington Canyon. The surface of owner of the property is C.O.P. Development Company. Subsidence impacts to the surface consists of two holes and a large subsidence crack. The impact area totals approximately .1 acre and is located in the drainage channel. The mine workings below the impact area has been abandon and sealed.

Coop Mining Company proposed to mitigate the impacts by backfilling the two sinkholes with rock and earthen material located adjacent to the holes. The fracture will be sealed by placing brattice along the fracture to prevent air movement, the fractures do not have openings large enough to pose a hazard to the public.

The operator has submitted calculations estimating the amount of runoff that will flow over the drainage channel after it is cut down, graded and reestablished. The channel will have



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a bottom width of 12 feet and a side slopes between 30 to 45 degrees. The maximum slope of the reclaimed channel will be approximately 8 percent. The steepness of the channel is expected given the surrounding landscape. Velocities for a 10-year, 24 hour precipitation event are calculated to be about 6.5 feet per second with an average depth of 0.33 feet.

The operator plans to reestablish the channel to a configuration that will handle the velocities using filter fabric to prevent piping, covered by layers of soil and riprap.

The site will be monitored biannually, during spring and fall to ensure compliance.

#### Recommendation

This amendment is recommended for approval.

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