



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 7, 1999

TO: File

THRU: Daron Haddock, Permit Supervisor *DH*

THRU: Joe Helfrich, Permit Supervisor *JH*

FROM: Michael Suflita, Reclamation Hydrologist *MS*

RE: North Diversion Channel & Husbandry Practices, Western States Mineral Corp., J.B. King Mine, ACT/015/002-99A, Folder #2, Emery County, Utah

SUMMARY:

On March 8, 1999 the Division received a submittal intended to show the "as-built" conditions at the reclaimed mine and to be amendments to several sections in the Mining and Reclamation Plan. This submittal is in response to NOV N98-45-4-1 resulting from a breach in the North Diversion Channel. Cleanout and repair work was done in November of 1998 and this submittal was sent to confirm the work and to be included in the MRP.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

Regulatory Reference R645-301-742.300

Analysis:

The submittal contains a map showing the reclaimed mine site with the North Diversion Ditch location and calculations showing the capacity of the cleaned-out channel. Included are surveyed cross sections of the ditch along its length and another map showing the drainage area from which water flows into the ditch. The ditch flows into the sediment pond at the lower end of the site. The design calculations for the ditch used a 10-year, 24-hour design event which is consistent with Division policy for diversion ditches leading to sediment ponds. The SCS curve number of 90 used in the calculations is appropriate for the drainage area. The Manning roughness coefficient was appropriate for a vegetated channel and the capacity was determined for a one-foot freeboard in the ditch. Conditions were checked for capacity at minimum ditch

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slope and at the minimum area of the ditch. The required design event flow is 3.7 cfs and the ditch capacity is a minimum of 11.6 cfs so the ditch, as cleaned out, appears adequate.

Previous situations have occurred where vegetation growing in the ditch has contributed to washout of the ditch. While the channel now appears adequate, the Applicant is urged to provide ongoing maintenance of the ditch to retain the capacity. Otherwise, the channel is likely to be washed out again. It must also be realized that the regulations require, before final bond release, that the ditch will have to be completely removed and/or filled in and the area revegetated.

The silt fence near the top of the ditch was removed as it's purpose has been served and it was deteriorated. The husbandry practices included in the amendment describe roughening the soil area and planting the approved seed mix. This area is located above the drainage ditch and will help reduce runoff to the ditch.

Finding:

The requirements of the regulations have been met.

RECOMMENDATION:

The amendment can be approved in its present form.