



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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April 9, 1999

E.M. Gerick, Vice President of Operations
Western States Minerals Corporation
250 South Rock Blvd., Suite 130
Reno, Nevada 89502

Re: As-Built Modifications, Western States Minerals Corporation, J.B. King Mine,
ACT/015/002-99A, File #2, Emery County, Utah

Dear Mr. Gerick:

The referenced amendment is hereby approved effective April 5, 1999. A stamped approved incorporated copy of this submittal is enclosed for incorporation into your Mining and Reclamation Plan. The technical analyses prepared by Senior Reclamation Specialists Bob Davidson, and Mike Suflita are provided.

TECHNICAL ANALYSIS:

RECLAMATION PLAN

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Under soil regulations R645-301-244, Soil Stabilization, and R645-301-357.300, Husbandry Practices, Western States Minerals performed additional reclamation enhancements on an approximate 0.67 acre parcel, located in the north-central portion of the disturbed area boundary, and directly south of the North Diversion Channel.

The "soil stabilization" and "husbandry practices" reclamation efforts were performed on a swale that is located directly south and above the north facing hillside and the north diversion ditch. This swale collects and ponds storm water runoff which ultimately flows to the north and down the hillside and into the ditch. As a result of this runoff, considerable rill and gully formation had occurred directly above the failed diversion breach (NOV#N98-45-4-1) and was likely the cause of the breached diversion ditch. During the November 1998 site work, this swale area had the ground "roughened" using a hydraulic excavator to pock or rough gouge the soil surface. After surface roughening, the area was hand broadcast seeded using the approved

As-Built Modifications

ACT/015/002-99A

April 9, 1999

Page 2

reclamation seed mix.

Surface roughening was used on the swale area to both enhance vegetation and help prevent excessive precipitation run-off onto adjacent slopes. The surface roughening procedure helps reduce runoff by collecting and harvesting rainwater within the deep gouged, or pocked surface. The deep gouging technique will help lessen runoff onto the adjacent north facing hillside, thereby reducing the sediment load into the north diversion ditch.

Under husbandry practices, R645-301-357.300, the following must be met:

R645-301-357.324. Where weed control practices damage desirable vegetation, areas treated to control weeds may be reseeded or replanted according to the following limitations. Up to a cumulative total of 15% of a reclaimed area may be reseeded or replanted during the first 20% of the extended responsibility period without restarting the responsibility period. After the first 20% of the responsibility period, no more than 3% of the reclaimed area may be reseeded in any single year without restarting the responsibility period, and no continuous reseeded area may be larger than one acre. Furthermore, no seeding is allowed after the first 60% of the responsibility period or Phase II bond release, whichever comes first. Any seeding outside these parameters is considered to be "augmentative seeding," and will restart the extended responsibility period.

In meeting the requirements of R645-301-357.324, the following have been met:

- The 10 year bond clock was reset when site underwent significant reclamation work for the refuse pile area in 1995. Therefore, the current work performed in November 1998 is within the 60% of the responsibility period. Phase II bond release has not been granted.
- The affected acreage is 0.67 acres which accounts for 2.23 % of the affected disturbed acreage (30 acres). This accounts for less than 3% of the disturbance area after the first 20% of the responsibility period.

Findings:

The requirements of this section meets the regulatory requirements.

As-Built Modifications

ACT/015/002-99A

April 9, 1999

Page 3

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 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 its 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.

As-Built Modifications

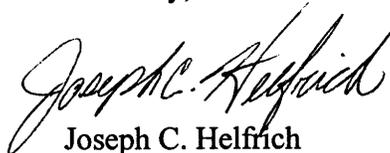
ACT/015/002-99A

April 9, 1999

Page 4

Thank you for your participation. Please call if you have any questions.

Sincerely,



Joseph C. Helfrich
Permit Supervisor

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Enclosure

cc: Mark Page, Water Rights, w/o
Dave Ariotti, DEQ, w/o
Bill Bates, DWR, w/o
David T. Terry, SITLA, w/o
Susan White, DOGM, w/o
Price Field Office

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