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STATE OF UTAH  
NATURAL RESOURCES  
Oil, Gas & MiningACT/015/002  
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May 30, 1989

TO: RICK SMITH, PERMIT SUPERVISOR

FROM: BILL WARMACK, RECLAMATION SPECIALIST *WAW*RE: RECLAMATION EFFORTS/MONITORING, J. B. KING MINE, WESTERN STATES  
MINERALS, INA/015/002, FOLDER #2, EMERY COUNTY, UTAH.

Division personnel (Tom Munson, Brent Stettler, Henry Sauer, and Bill Warmack) met with Sam Bamberg, consultant for Western States Minerals (WSM), on May 11, 1989, at the J. B. King Mine site. The purpose of the on-site meeting was to discuss reclamation efforts to-date and possible alternatives to promote revegetation success and control erosion.

Several commitments were made by WSM through Mr. Bamberg. The first and of upmost importance was to provide a contractor to continually monitor the site during crucial times of the year (summer thunderstorms, winter cattle grazing, etc.). In addition to this, the following list of topics were discussed:

#### I. REVEGETATION

##### 1. Monitoring Requirements

According to the PAP, Vol. I, Section UMC 784.13, monitoring of vegetative cover and woody plant density was scheduled for the third year following reclamation, which was 1988. The 1989 work is a "catch up" effort and must involve statistically adequate sampling, employing the same methods used for the baseline study. Range condition was to be reassessed every three years during the bond liability period, starting with year 1 (1986). An assessment will be done in 1989.

##### 2. Additional Interseeding

Areas in which sparse vegetation was noticeable, especially on the western slope of the refuse pile, will be monitored for revegetation success. Due to the steepness of the slope and the aspect, additional disturbances will not be done at this time. However, if the standards for reclamation are not realized, further seeding may be required which would restart the bonding liability period.

##### 3. Monitoring of Perimeter Fence

Historically, the perimeter fence around the site has been subject of much controversy. The initial installation was inadequate and incomplete thus allowing cattle access into the revegetated area. In January of this year, cattle were observed grazing on site and a Notice of Violation (NOV) was issued to WSM for failure

to maintain fences. Since then, the fence has been reinstalled and well maintained. Henry has discussed the grazing rights for this particular section with the Division of State Lands and feels that the Special Use Permit and Grazing Permit will be revised to delete grazing from the mine property.

4. Reference Area

According to Exhibit 3, Vegetation Type and Reference Area Map for the J. B. King Mine and Adjacent Areas, the reference area (RA) is depicted on the northeastern corner of the property. On the upper bench, a plot was located that resembled the description in the MRP (staked with metal posts (roof bolts) and level to gently sloping). Further investigation is required to determine if the plot is actually the reference area. Although plant species were well represented, the RA does not appear to represent the mine site in regards to the aspect, soil, or slope (steepness). Brent and L. Kunzler (DOGM) plan to visit the site in June to locate the reference area.

5. Bonding Liability Period

UMC 817.116 mandates the period of extended responsibility under the performance bond requirements of subchapter J initiates after the last year of augmented seeding, fertilization, irrigation, or other work which ensures success in areas of less than or equal to 26.0 inches average annual precipitation and continues for not less than 10 years. By these standards, the bonding liability period would restart on those particular portions of the reclaimed area which were reworked rather than for the entire site.

II. **EROSION CONTROLS**

1. 1988 Compliance Work

After issuance of a NOV in September 1988, erosion control measures were repaired and/or reconstructed (contour furrows). However, due to the extent of the erosion, several areas were not addressed before the onset of winter. Therefore, to prevent further erosion from developing, the remaining eroded or marginal locations need to be repaired. These additional areas have been flagged and were discussed with Jim Blackburn on May 16, 1989.

2. Alternatives

One major contributing factor to the extensive erosion is the poorly installed silt fences. For the most part, the fences were installed along a straight line instead of being fanned uphill (U-shaped). These structures tend to

rapidly fill with sediment then discharge runoff from the ends and ultimately back into erosion channels. Therefore, the ends of the existing silt fence structures should be extended to form the U-shape; material should also be well keyed in (approximately 1 foot) to prevent piping or blowouts by wind or water.

### III. SUBSIDENCE CRACKS

Settling and minor openings have started to form where fill material had been placed in the cracks (Fall 1988). To reduce the openings, the holes will be filled in by hand and will be monitored to identify if movement of the fill material is occurring.

### IV. ROAD RECLAMATION

To eliminate public access from the site, construction of an alternate road outside of the perimeter fence was suggested. This new route would tie into the upper bench access road which has been used during woodcutting and hunting activities. Depending upon the decision of State Lands and/or the Division, the mine access road will be ripped, mulched, and seeded to provide a more suitable growing medium.

c. c. PFO  
Western States Minerals