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

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file J.B. King
T/015002/2

April 14, 1993

To: Lowell P. Braxton, Acting Director

From: Pamela Grubaugh-Littig, Permit Supervisor

Re: January 20, 1993 Response to December 7, 1992 Letter, J.B. King Mine, Western States Minerals Corporation, ACT/015/002, Folder #5, Emery County, Utah

The technical staff has reviewed the additional information submitted by Western States Minerals Corporation required by the December 7, 1992 letter from the Division Director for the abatement of NOV #N91-35-6-1 and NOV #N91-32-6-1. This memo summarizes the findings of the technical staff (see attached memos) in regards to the information that was submitted and my recommendations as to the adequacy of the response.

NOV #N91-35-6-1

The December 7, 1992 letter stated that "Abatement of N91-35-6-1 will be accomplished when the text and appropriate maps in the Mining and Reclamation Plan are modified to show elimination of the silt fences."

Map JBK-1 was resubmitted with a revised date of 1/5/93. The map indicated that the silt fences were eliminated but also deleted the green shading which identified the 3.8 acres of augmentive seeding done in October 1989. Additionally, the map was not recertified after these changes. The area of augmentive seeding must be delineated and the map certified prior to approval of Map JBK-1, Revision (1).

Therefore, this map may be accepted with the area of augmentive seeding accurately depicted on the map, the map recertified and resubmitted by May 3, 1993. The silt fences may be removed.

NOV #N91-32-6-1

The December 7, 1992 letter stated that the "Division will consider the adequacy of any additional data for abatement of this violation.. " The Division outlined four areas to consider. This violation had also been previously modified per the Order issued by Dianne R. Nielson on March 10, 1992 by stating that "the remedial action required for abatement will be the submission of a complete and adequate plan for design and construction of the feeder ditch and the main feeder ditch to meet the requirements of Utah Code Annotated 40-10-1 et seq. and Utah Administrative Code R645-100-1 et seq. The January 20, 1993 letter submitted **additional** information relative to the four suggested areas to show:

1) "The current configuration, in plan and cross-section of the feeder ditch and the main feeder ditch". The current configuration was surveyed in December 1992 and submitted. This configuration documents the fact that the ditches do not meet the design found in the approved plan and the abatement plans do not meet the requirements of the original abatement which was to "construct the main feeder ditch and the feeder ditch in accordance with the approved plan". The current plan shows a straight channel with no bends or meanders, but the channel configuration on the ground currently does meander. The modified abatement to submit complete and adequate plans for **design** and construction of the feeder ditch and the main feeder ditch to meet the requirements of UCA 40-1-1 et seq. and UAC R645-100-1 et seq. was not submitted.

2) "An evolutionary 'design sequence' beginning with the constructed configuration in the approved plan, through the present configuration, to an ultimate configuration more compatible with the present geomorphology. Included with additional text would be a series of maps and channel sections (cross sectional and longitudinal) depicting anticipated evolutionary stages ultimately resulting in geomorphic stability". The operator failed to submit a "design sequence" which depicts the evolutionary ditch configuration through a series of map and cross sections. The response to this concept did not include cross section. Very little information was given for the final configuration and no information on the intermediate designs were submitted. The January 20, 1993 plan showed the current cross sections of ditches using what appears to be a maximum depth profile i.e. a profile from the highest side of the ditch to another side , rather than a bank- full profile, i.e. a profile at the maximum flow depths. The operator then superimposed this design profile (the maximum depth profile) over the top of the configured cross-sections. (It should be noted that the final location of the "evolutionary ditch" was taken from an old drill hole location and

mining sequence map which was very difficult to interpret due to its poor quality).

It should be noted that the "constructed configuration in the approved plan" was never implemented in the field. Therefore, the performance of said design was not allowed the opportunity to perform. The "present configuration" is probably closer to the "constructed configuration" than that in the approved plan.

3) "A discussion of how the proposed amendment to the Reclamation Plan will ensure compliance with applicable laws, rules, and performance standards, including prevention to the extent possible additional contributions of suspended solids to stream flow outside the permit area." The operator states that by achieving the major reclamation objective of returning the land to its premining uses they have complied with the law. The operator fails, however, to address any of the many other applicable performance standards. The operator's plans do not meet the requirements of the rules due to the fact that the current channels are not **stable and there is no demonstration as to how to measure the stability of a disturbed geomorphically stabilized channel.**

The intent of the rules is to provide a stable engineered channel properly located and maintained pursuant to R645-301-742.300. No **specific stability criteria** has been submitted by which the stability can be gauged in the channel and when potential **stability** would be attained in the future. This plan does not show **how** the ditches will obtain **stability** based on the requirement of R645-301-742.300. Specific stability criteria must be included in an "engineered design sequence", so that the requirements of the rules can be met.

It has been mentioned before and should be pointed out again that this concept could be considered an Experimental Practice pursuant to R645-302-210. As part of the consideration for an Experimental Practice, the operator would have to decide if they are willing to back up their idea with monitoring.

4) "How these changes will approximate the characteristic of the original, premining channels." The January 20, 1993 submittal states that "previous attempts to control and re-route the main and feeder drainage ditches will only have a temporary effect on inhibiting these channels from seeking their original configuration. The time required before the channels will resemble their original configuration is somewhat unknown due to changes caused by mining, since the ultimate configuration for these channel is highly dependent on the magnitude and duration of major storm events." How these changes approximate the

characteristics of the original premining channels was not adequately addressed other than the fact that it is unknown.

Amendments to Plan Submitted in January 20, 1993 Letter

In addition to responses to the violations, there were changes submitted to amend the currently approved reclamation plan. This section discusses the adequacy of these amendments to the plan.

The operator changed the text relative to the period of extended liability. The revised text of UMC 817.106 Regrading or Stabilizing Rills and Gullies stated that they would "like to reserve the right to provide some limited site maintenance by the use of approved motorized equipment on a case-by-case basis without resetting the bond clock". Pursuant to R645-301-357.100, the period of extended liability will begin after the last augmentive work, excluding husbandry practices that are approved by the Division. The repair of rills and gullies is considered augmentive work and not a normal husbandry practice at this time. Additionally, husbandry practices have not been approved as part of the State Program as of this date and cannot be considered. Therefore, the statement concerning the bond clock must be removed **and** the area in which gullies were repaired in 1992 must be delineated on Plate JBK-1 Revision (1).

The text was changed pursuant to UMC 817.45 Hydrologic Balance: Sediment Control Measures to state that "very little sediment has accumulated behind these silt fences". This statement is misleading and should be deleted due to the fact that the appearance of little sediment is due to the operator maintaining and cleaning out the accumulated sediment as requested during Division inspections and washing of the sediment downhill when they have not been maintained.

The operator also revised the text to state that "after the silt fences are removed, the sediment will be spread out evenly". This statement should be changed to read that "the sediment will be spread out unevenly".

The operator amended the text regarding UMC 817.56 Post Mining Rehabilitation of Sedimentation Ponds, Diversions, Impoundments and Treatment Facilities. The operator proposed to allow the sedimentation pond to be "left functional at bond release and be allowed to fill in naturally." The Division

mistakenly approved the retention of the sedimentation pond after bond release as a sediment control structure without the appropriate justification or landowner comments and purpose being adequately addressed. If justification is provided, then the requirement that the pond must "have been maintained properly and met the requirement of the approved reclamation plan...the operator will renovate such structure if necessary..." R645-301-880.320 requires that prior to Phase II bond release on permanent impoundments that "provision for sound future maintenance by the operator or the landowner have been made with the Division." A Division Order should be issued for the sediment pond to be reclaimed after vegetation establishment unless there is a permit revision to change the postmining land use.

A proposal was made to allow the removal of the topsoil material from the surface of the refuse pile by erosion and to allow the eventual exposure of coal refuse. This proposal does not meet the performance standards pursuant to R645-301-242 et seq., R645-301-553.250, R645-301-553.300, R645-301-731.300, and R645-301-745.113. Refuse data has not been presented to substantiate that the refuse material within the backfill is not "acid and toxic forming", see attached memo to Pamela Grubaugh-Littig from Henry Sauer dated November 10, 1992. No demonstration has been submitted to support the claim that the impacts upon plant growth and surface water quality where the refuse is exposed would be "negligible".

Conclusion

Violation N91-35-6-1 may be terminated upon the following: Map JBK-1, Revision (1) must be recertified and the area of augmentive seeding done in October 1989 renoted on the map exactly where it was removed.

Violation N91-32-6-1 cannot be terminated. Complete and adequate plans for design and construction of the feeder ditch and main feeder ditch to meet the requirements of UCA 40-10-1 et seq. and UAC R645-100-1 et seq. and the four areas of additional information requested in the December 7, 1992 letter were not adequate in the January 20, 1993 letter to abate this violation.

Amendments to the plan have been discussed and the responses should be submitted under separate cover.