



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV
URANIUM RECOVERY FIELD OFFICE
BOX 25325
DENVER, COLORADO 80225

NOV 28 1989

URFO:PJG
Docket No. 40-8905
04008905390E

MEMORANDUM FOR: Docket No. 40-8905
FROM: Pete J. Garcia, Project Manager
SUBJECT: TECHNICAL EVALUATION OF THE TAILINGS EMBANKMENT SYSTEM FOR THE AMBROSIA LAKE MILL

By letter dated July 27, 1989, Quivira Mining Company submitted their annual technical evaluation of embankment performance for the tailings retention system at the Ambrosia Lake Mill. The technical evaluation and submittal are required by Condition No. 19 of Source Material License SUA-1473. The tailings retention system at the Ambrosia Lake Mill consists of Tailings Pond No. 1, which is inactive and is being prepared for final reclamation, and the active Tailings Pond No. 2.

The staff review of the submittal indicated the following major points regarding Pond 1:

1. Recontouring activities to eliminate any ponding of rainfall on the pile have been completed.
2. The southwest portion of the pile has been recontoured to a 5H:1V outslope as specified in the proposed reclamation plan and covered with two feet of natural soil.
3. A natural soil layer has been placed over 79 acres of exposed tailings on the pile top to provide control of blowing tailings.

The following information was provided regarding activities for Pond 2:

1. Approximately 15,000 cubic yards of contaminated soil from recent cleanup activities was placed in the pond.
2. A pump was installed in the southwest corner of the pond to allow pumping of liquids to the lined evaporation ponds.

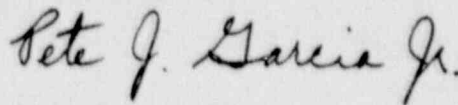
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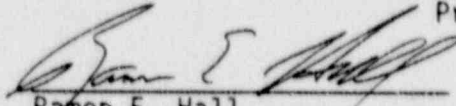
Quivira also provided summaries of piezometer data and the results of stability analyses performed for the ponds. The piezometer data for both ponds indicate significant decreases in the phreatic surfaces within the embankments. The results of the stability analyses indicate that the factors of safety for both embankment systems exceed the minimum values recommended in Regulatory Guide 3.11.

The staff review of the technical evaluation performed by Quivira indicates that the embankment systems for Ponds 1 and 2 are performing adequately. No areas of concern were noted. No further action is therefore necessary at this time.



Pete J. Garcia
Project Manager

Approved by:



Ramon E. Hall
Director

Case Closed: 04008905390E

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