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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

AUG 27 1979

Docket No. 40-8725

MEMORANDUM FOR: Ross A. Scarano, Chief
Uranium Recovery Licensing Branch

FROM: Eugene A. Trager
Uranium Recovery Licensing Branch

SUBJECT: MEETING MINUTES - GULF MINERALS RESOURCES
PROPOSED MT. TAYLOR PROJECT

Purpose

To discuss work done by Gulf Minerals Resources in response to NRC review comments on the tailings impoundment system proposed for the Mount Taylor Project, Docket No. 40-8725.

Place and Date

NRC Offices, Silver Spring, Maryland, August 14, 1979.

Attendees

Gulf Mineral Resources Company -

W. L. Rogers
R. E. Bohm
K. H. Rasmussen

R. Hail (Earth Sciences Assoc.)
F. Gifford (Wahler Associates)

NRC, Uranium Recovery Licensing Branch -

R. A. Scarano (part-time)
H. J. Miller
S. F. Manger
R. Kaufmann
E. A. Trager

J. D. Nelson (Colorado State University)

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Discussion

Gulf presented a summary of work that has been conducted to evaluate tailings management alternatives for the Mount Taylor Project as had been agreed to in the June 19-20, 1979 meeting between Gulf, NMEID, and NRC. The presentation included information provided to Gulf in an August 3, 1979 letter from W. A. Wahler and Associates concerning information requested by the NRC.

The tailing management system proposal involves the construction of a large, sing. unsegmented impoundment by construction of a dam (228 from base of foundation and with a 2.5:1 downstream slope) across a subdrainage in La Polvadera Canyon. The impoundment would be unlined with seepage being impeded by the low permeability Dilco Coal Member which underlies the site. Gulf had been requested at the June 19-20, 1979, meeting to investigate below grade storage alternatives and other alternatives such as staged impoundment plans that would be more stable in the long-term. Gulf proposed this meeting in order to obtain feedback on work in progress to develop such alternatives. Gulf presented information on two disposal schemes which involve completely below grade burial of tailings.

The primary NRC concerns expressed at the meeting are summarized as follows:

1. Gulf described an alternative consisting of a series of pits near the proposed La Polvadera Canyon site. It involves the use of unlined excavated pits in scattered locations and an evaporation pond located at the proposed site. Some of these pits are located in the mouth of a large drainage. Gulf should examine modifying this alternative to one involving the use of cells while avoiding the path of runoff from the large upstream drainage.

2. An alternative consisting of the construction of cells in the San Lucas Canyon was outlined but little information has been developed so far on this alternative. The upstream drainage area and relatively shallow piezometric surface could be a problem.

3. Concern was expressed about aspects of the proposed tailings impoundment system and alternatives. Changes were suggested that seem practicable for a tailings impoundment at this site.

    a. It was requested that Gulf consider modifying the proposal to include a multicell/segmented design involving excavation of and construction of a series of smaller embankments. This modification would result in a tailings disposal system with characteristics more similar to those of below-grade systems as described in the GEIS, e.g., the tailings would be better protected from erosional forces by natural ground contours.

The White Mesa Project FES (attached) includes a description of such a system. This appears to be a practicable alternative particularly because Gulf stated that the Dilco formation is ripable at this site.

b. The proposal (and alternatives) involves the use of an unlined impoundment. Steps must be taken to reduce seepage to the maximum extent reasonably achievable. There is a need to examine methods of reducing system head (e.g., shallower impoundment(s) and/or filtering (system underdrain)) and lining systems. This is particularly necessary because of the possible accelerated laterial spreading of liquid contaminants through subsurface fractures. The Cotter Canon City mill was given as an example of seepage problems that might occur.

When the outstanding information on the alternatives is provided by Gulf a detailed cost comparison along with the cost bases should be included. (Assumptions made in calculations for all aspects of the alternatives should be included.)

NOTE: In a telephone conversation on August 15, 1979, Mr. Bohm indicated that Gulf will have by August 30 a conceptual tailings management system proposal which addresses the concerns expressed by the NRC staff. We will meet in Silver Spring on August 31, 1979 concerning this new proposal.

E. A. Trager Jr.

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Division of Waste Management