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MEMORANDUM

April 27, 1981

TO: Maxine S. Goad, Program Manager

FROM: Patrick Longmire PL

SUBJECT: UNC Mining and Milling - Uranium Mill Tailings Backfill Environmental Report Northeast Church Rock Mine

The environmental report for the UNC backfilling operations, submitted by Todd Miller on April 18, 1981, at the Northeast Church Rock mine has been given a preliminary review by the staff of the NMEID. The following comments and questions have been generated from this review. Please provide input on the following items enumerated below:

It would be useful to provide the NMEID with a detailed hydrologic map depicting drawdown contours as determined from continuous dewatering of the Westwater Formation. This is in response to the statement made on page 6 of the report "The cone of depression has been observed to extend upward through the Westwater at an angle of from 50 to 60 degrees from the furthest extent of activity in the down-dip direction and at an angle of from 35 to 40 degrees in the up-dip direction." Futher applications include modeling of drawdown which you have committed to submit soon. In the future, the development of a sound water quality monitoring network upon cessation of mining activity will depend on this information.

A further justification is needed on the statement of page 6 pertaining to the 90 to 95% capture of decant water. It seems reasonable that eventually most water from the Westwater Formation would be intercepted by dewatering practices, however, this statement needs to be qualitatively and quantitatively justified.

Please provide an abstract on the ground water computer code MASS - multi-component transport including purpose, description, similarities to other computer models, programming language and source of code.

A quantitative statement concerning the affect of Probable Maximum Flood (PMF) on the surface storage facilities for backfilling material would be useful, in order to accurately assess the surface flooding potential. Useful information would include a detailed (e.g. small scale) topographic map outlining the extent of the PMF and a brief description on the construction of the berm(s) surrounding the surface tailings storage area.

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