ITASCA
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20 June 1986

David Tiktinsky - SS623
U.S. Nuclear Regulatory Commission
Division of Waste Management
Washington, D.C. 20555

"NRC Technical Assistance
for Design Reviews"
Contract No. NRC-02-85-002
FIN D1016

Dear David:

Enclosed is Itasca's trip report for the meeting held in Silver Spring, 16-17 June 1986 to discuss the Hanford Final Environmental Assessment. Please call me if you have any questions.

Sincerely,

Roger Hart
Project Manager

cc: J. Greeves, Engineering Branch
Office of the Director, NMSS
E. Wiggins, Division of Contracts
DWM Document Control Room

Encl.
mb/ks

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3158

ITASCA TRIP REPORT

DATES: 16-17 June 1986

LOCATION: Nuclear Regulatory Commission
Silver Spring, Maryland

PURPOSE: Review and Discussion of Final Environmental Assessment for proposed Hanford Repository Site

ATTENDEES: Mark Board (Itasca)
John Buckley (NRC)
Peter Huck (Engineers International)

PREPARED BY: Mark Board

SUMMARY

The major and detailed comments submitted by NRC to DOE for the Basalt Draft Environmental Assessment were reviewed in light of the changes made in the Final Environmental Assessment. It was determined that the two major geomechanical comments (#6 and #7) were adequately addressed through either changed positions or added commentary in the FEA. The detailed comments were then reviewed and final dispositions determined. In general, these detailed comments concerned either the ability to support the basalt over the retrieval period or the possible flooding of the workings by excavating or drilling into the flow top, bottom, or a water bearing intraflow structure. Written discussions regarding the Draft EA comments were developed, and a determination of status for each made. A final meeting was held with M. Natajara and J. Greeves concerning the final disposition of comments.

Disposition of Major Comments

Two major geomechanical comments on the Draft EA were submitted by NRC in March 1985. The first dealt with the thickness of the candidate flows and the consequent flexibility in vertical placement

of repository rooms. In the draft EA, BWIP left open the possibility of moving the repository to any of four flows within the Grande Ronde System. Several of the flows did not appear to have sufficient thickness. Also, the Cohassett Flow, the prime candidate, has an internal vesicular zone with significantly reduced strength. The dense interior portion of the flow beneath this vesicular zone is only marginally thicker than the 21 meter minimum required.

In the final EA, two significant changes in the BWIP program have occurred. First, the Cohassett Flow is now considered the only viable candidate horizon. Reference to all other flows have been dropped. Second, additional analyses by Barton (1986) have indicated that the internal vesicular zone may be supported with approximately the same methods as prescribed for the dense basalt and, thus, no support or maintenance problems are expected. Therefore, BWIP declares that they are now free to develop the repository in any area of the Cohassett Flow, including the vesicular zone. The issue of waste emplacement within this zone was avoided in the FEA. In any case, these changes effectively eliminated the NRC comment.

The second major comment concerned the method of shaft construction and the NRC concern that BWIP was overstating the substantiation for "reasonably available" technology based on small hole drilling on the Hanford site and previous shaft drilling experience. The NRC comments stated that small hole drilling and other shaft sinking experience does not provide a sufficient data base for claiming reasonably available technology. This point is well taken. Although, in the FEA, BWIP continues the argument that these constitute a sufficient experience base, a caveat has been inserted which indicates that a great deal of uncertainty exists in the success of the shaft drilling program. Because BWIP has recognized NRC's comment, and because we feel that no other method of shaft sinking is superior to that proposed by BWIP, we have suggested that the major comment be dropped.

Detailed Comments

The detailed geotechnical comments were reviewed and referenced to the FEA with regard to changed positions. The status of each of these comments was determined and a technical response was written for each. These responses are currently being typed in standard format at NRC. In addition, reviews of the report by Barton (1986) and Mitchell (1986) have been made and will be appended to the FEA review.

References

Barton, Nick. Final Report: Rock Mass Quality and Support Recommendations for Basalt at the Candidate Repository Horizon, Based on the Q-System. Rockwell Hanford Operations SD-BWI-ER-012 (Rev. 1). April 1986.

Mitchell, S. J. "Evaluation of Damaged Rock Zone Around Repository Openings," Rockwell Hanford Operations Computational Brief No. 573, March 13, 1986.

attach
mb/ks

COST BREAK-OUT

Labor

M. Board	16 hrs @ $22.02/hr	$ 353.32
	TOTAL LABOR	$ 353.32

Actual Expenses

Travel

Airfare (to WDC) Board	$ 580.00
Miscellaneous Travel Expenses (car rental, taxis, gas, parking)	110.00

Motel

Board (3 nights @ $48.95/night)	$ 146.85

Meals

Board	$ 60.00

Miscellaneous Expenses

Board (telephone calls)	$ 10.00
TOTAL EXPENSES:	$ 906.85