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NUCLEAR WASTE CONSULTANTS INC.
8341 So. Sangre de Cristo Rd.,
Littleton, Colorado 80120
973-7495
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August 18, 1986

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009/3.5/DBS.001
RS-NMS-85-009
Communication No. 88

U.S. Nuclear Regulatory Commission
Division of Waste Management
Geotechnical Branch
MS-623-SS
Washington, DC 20555

Attention: Mr. Jeff Pohle, Project Officer
Technical Assistance in Hydrogeology - Project B (RS-NMS-85-009)

Re: Salt Site Numerical and Analytical Evaluations of Conceptual Models -
Subtask 3.5, Report No. 1

Dear Mr. Pohle:

This cover letter transmits to the NRC staff the first report on numerical and analytical evaluations of aspects of conceptual models for the Salt site in Deaf Smith County, Texas, Subtask 3.5 of Contract No. RS-NMS-85-009. This report has been prepared by the Dr. Daniel B. Stephens and Messrs Robert Knowlton and Jeff Minier, all members of the Daniel B. Stephens and Associates site team for Salt. The report has received management and initial technical reviews by Mark Logsdon of Nuclear Waste Consultants. These mini-reports are being submitted for additional technical quality-assurance review by members of the NWC Technical Pool simultaneously with their submission to you, per the approach described in the draft QA plan that has been submitted to the staff for review and comment. NWC considers that this is an appropriate approach, since the current contract requires semi-annual updates of these reports. Copies of the outside reviews will be submitted in their entirety, along with the response/revision documents that are produced to address any review.

The initial set of five problems addressed by DBS includes:

1. Analysis of the potential for unsaturated flow within the evaporite aquitard (Mini-Report No. 1).
2. Transport in salt by vertical porous media flow (Mini-Report No. 2).
3. Transport through interbeds within HSU B by horizontal porous media flow (Mini-Report No. 3).
4. Transport in the Wolfcamp by horizontal porous media flow (Mini-Report No. 4).
5. Analysis of the potential for geothermally-induced ground-water convection within the evaporite aquitard (Mini-Report No. 5).

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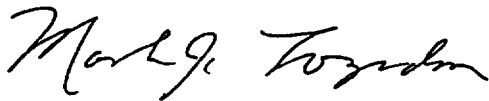
July 21, 1986

DBS and NWC anticipate that these products - and the performance assessment approach on which they are based - will evolve with the project. Updates of these and subsequent analyses will be submitted to the NRC in the semi-annual documents that are stipulated in the current contract. As discussed above, technical review comments will be included in the updates, as appropriate.

The submission of this letter report meets the contractual deliverable for Subtask 3.5 of Contract Number RS-NMS-85-009 and completes the subtask requirements for Numerical Evaluations of Conceptual Models for Salt at this time. Per the terms of the contract, DBS/NWC will submit regular updates of this report.

If you have any questions concerning this report or related matters, please contact me immediately.

Respectfully submitted,
NUCLEAR WASTE CONSULTANTS, INC.



Mark J. Logsdon, Project Manager

Att: Salt Site Numerical Evaluations, Subtask 3.5 - Mini-Reports 1-5

cc: US NRC - Director, NMSS (ATTN: PSB)
DWM (ATTN: Division Director) - 2
Mary Little, Contract Administrator
WMGT (ATTN: Branch Chief)

L. Davis, WWL
M. Galloway, TTI

bc: J. Minier, TTI