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Distribution:

J Pohle

(Return to WM, 623-SS)

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December 29, 1986

009/Task 5/NWC.009  
RS-NMS-85-009  
Communication No. 125

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: Topical Reports on Uncertainty in Hydrogeologic Investigations Related to  
GWTT

Dear Mr. Pohle:

In a telephone conversation of December 10, 1986, you and I discussed the status of the Staff's direction to the Hydrogeology TA contractors concerning the Task 5 Topical Reports on uncertainty in hydrogeologic investigations related to pre-placement groundwater travel time. The matter was originally discussed at a contract meeting in Rockville, Maryland on November 4-5 (NWC Communication No. 111), at which time the contractors were given an initial set of topics on which they were to initiate work.

Following submission of initial efforts from Williams and Associates and NWC, Dr. Tilak Verma (NRC) informed Adrian Brown (NWC) and staff of Williams and Associates that new concepts of topics and organization for this task were under development by the staff. NWC has not proceeded with the work that was begun in November, pending written clarification from the NRC Project Officer.

Based on my understanding of the conversation of December 10 and Mr. Brown's understanding of his discussions with Dr. Verma, the direction that the Staff now wishes the contractors to pursue is as follows:

- o There will be only three topical reports, not four as was previously anticipated.
- o The first report will address sources of uncertainty in a) conceptual models of hydrogeology; b) hydrogeologic data used to quantify the conceptual models; and c) analytical methods used to evaluate groundwater travel time. Williams and Associates would have the lead on preparing this report.

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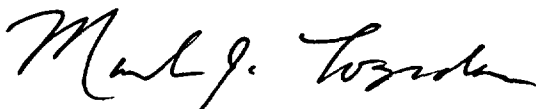
- o The second report will deal with approaches to treating uncertainties in field methods that are used to develop and test conceptual models and to determine hydraulic coefficients and other parametric data (e.g., boundary conditions). The report would consider field tests that can be used to reduce current uncertainties in the hydrogeologic data base and would also consider and attempt to quantify to the extent practicable any uncertainties that may be introduced through the use of specific field methods. Williams and Associates would have the lead in developing this report.
- o The third report will address methods for evaluating groundwater travel time that can accommodate uncertainties (which have been described in paper 1), elaborate on the sources of uncertainty in analytical methods themselves (originally introduced in paper 1), and provide approaches to reducing, or at a minimum quantifying, the uncertainties in estimates of pre-emplacement groundwater travel time. NWC would have the lead in preparing this document.

We do understand that the topical reports are to be developed in a generic fashion, by which we take it that, at a minimum, the material must be relevant to all geologic media that are being considered for the U.S. HLW disposal program.

We are very anxious to begin work on these topical reports, and in order to fully accommodate the proposed concept of joint contractor production, it is important that we have ample lead time. Please comment on my statement of your current planning and/or provide written direction as soon as possible.

If you have any questions concerning this letter, please contact me immediately.

Respectfully submitted,  
NUCLEAR WASTE CONSULTANTS, INC.



Mark J. Logsdon, Project Manager

cc: L. Davis, WWL  
M. Galloway, TTI  
J. Minier, DBS