

AUG 29 1985

426.1/A1757/85/08/26

- 1 -

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Dr. Robert M. Cranwell, Supervisor
 Waste Management Systems
 Division 6431
 Sandia National Laboratories
 P. O. Box 5800
 Albuquerque, NM 87185

(Return to WM, 623-SS)

Dear Dr. Cranwell:

I have received and reviewed your July monthly progress reports, dated 14 August 1985, for FIN's A1158, A1166, and A1757. The work performed during July has been fully satisfactory. Separate comment sections for each project are provided below:

Project A1158

Thank you for providing, in a reasonably timely fashion and on relatively short notice, your review comments of [Draft] PNL-5513, entitled "Preliminary Review and Evaluation of NRC and DOE Geohydrologic Flow and Transport, and Environmental Consequence Methodologies for Performance Assessment of Geologic Disposal Sites for High-Level Nuclear Waste". Your comments, along with those provided by NRC's Office of Research, have been incorporated in a letter that was transmitted to P. A. Craig of DOE on 02 August 1985. A copy of this letter is provided for your review as Attachment 1.

Richard Codell of our staff has queried one of the comments provided on the PNL draft by your staff concerning the ability of Monte Carlo approaches to account for spatial and temporal correlation. The Sandia comment stated that "General Monte Carlo approaches, such as random sampling, cannot account for correlation. As mentioned before, Latin Hypercube can." Richard Codell believes that the PNL report was considering the generation of spatially correlated random fields using "turning band" or "nearest neighbor" methods, and that either Monte Carlo or Latin Hypercube Sampling techniques could be suitable for this purpose.

Thank you for the updates on the status of the Unsaturated Tuff RSD, the SWIFT II Self-Teaching Curriculum, and the set of sample problems for the TOUGH code.

Project A1166

The first draft of the Quality Assurance Plan for Computer Software has been received and is undergoing review. After consultation with NRC management I

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have determined that a very comprehensive review of this draft should be performed by our staff. Comments will be provided to you prior to the end of September. It should be noted that this is a first draft and not a final draft as inferred in your monthly report, and thus has not previously undergone NRC review.

Thank you for providing a satisfactory explanation of the discrepancy in year-to-date expenditures as shown on the April invoice vs. the June monthly report. I am satisfied that no significant discrepancy exists at this time.

In my letter to you dated 01 July 1985 I requested that you provide additional detail regarding problems recently encountered by your staff and by Peter Bogorinski (GRS) in applying the SWIFT code. Because FIN A1166 will terminate on September 30, you are hereby requested to postpone any additional work under this request. It is likely that this work will be resumed under another project sometime during FY86.

Project A1757

The preliminary draft of the document entitled "Numerical Modeling of the Ground-Water Flow System at the [Reference Repository Location], Hanford Site, Washington" has been reviewed by NRC staff and by our contractor, Williams & Associates. Attachment 2 is a letter from G. Winter to M. Gordon that highlights the principal comments from Williams & Associates. Attachment 3 is a copy of the draft document that incorporates markups from all reviewers.

In addition to comments and markups in the attachments, the following information should be made a part of the draft support document:

- ° Figure 3.51 (Top-of-Basalt Contour Map) from the SCR (1982), along with a brief discussion of its significance.
- ° Hydrographs showing hydrologic baseline trends, as presented in documentation provided by DOE during recent NRC/DOE hydrology workshops (including the meeting on May 22, 1985). Hydrographs should be shown for the cluster sites DC-19, 20 and 22 and for other well locations for which data are reported, and should be presented in figures that can be readily updated as new data are provided by DOE.
- ° Preliminary outline in the form of a proposed table of contents. The program plan now being prepared for this project should provide the necessary information.

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- ° Reference list of documents applicable to work and products under FIN A-1757, including those references provided in my previous reviews of monthly reports. This reference list should be expanded as new and applicable references are received from DOE, and should serve to document the scope and depth of DOE's geohydrologic site characterization activities.
- ° Appendix containing the summary reviews of previous geohydrologic modeling studies of the Hanford site and region. As indicated in your report, the remainder of these reviews will be forwarded to NRC in your next monthly report.

Overall, it is recognized that the document is a preliminary draft which is intended to be updated as work continues to progress under DOE's site characterization activities at BWIP. As such, the document serves well as an appropriate vehicle for geotechnical intercommunication between and among the NRC staff and all relevant contractors. Future reviews of the draft will be requested periodically.

Please note that an interagency BWIP data review session will likely take place in Richland, Washington prior to 01 JAN 86. You will be notified of the dates of this review as soon as they are agreed upon, and I will request the attendance of an SNL representative (Paul Davis), schedules permitting, at that time.

The action taken by this letter is considered to be within the scope of the current contracts A1158, A1166, and A1757, respectively. No changes to cost or delivery of contracted services and products are authorized. Please notify me immediately if you believe that this letter would result in changes to cost or delivery of contracted products for each of the above contracts.

Sincerely,

Original Signed *BA*

Neil M. Coleman, Project Manager
Hydrology Section
Geotechnical Branch
Division of Waste Management

Enclosure:
As stated

FC	: WMGT	: <i>WMGT</i>	:	:	:	:
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426.1/A1757/85/08/26

- 4 -

cc: P. A. Davis, SNL
R. L. Hunter, SNL
G. F. Wilkinson, SNL

Enclosures available in DCC.

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