

426-1(0828) 08/86/03/03

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Distribution:

Dr. Gary K. Jacobs
Environmental Sciences Division
Building 1505/Room 312
P. O. Box X
Oak Ridge National Laboratory
Oak Ridge, TN 99352

(Return to WM, 623-SS)

Dear Dr. Jacobs:

SUBJECT: CONTRACT NO. NRC-19-03-01, FIN B-0287,
ORNL NO. 41-37-54-92-4, "TECHNICAL ASSISTANCE
IN GEOCHEMISTRY," JANUARY (1986) MONTHLY
PROGRESS REPORT

I have reviewed the January monthly progress report dated February 12, 1986.
Based on my review, I have the following comments.

Task 1 - BWIP Geochemical Technical Assistance

- o Progress to date is satisfactory.
- o Letter report LR-287-24 "Review and Evaluation of 'Analysis of Solids From . . . Hydrothermal tests . . . , SD-BWI-TI-278'" has been reviewed. My review of this report reinforces the need for a visit to BWIP. I am looking into the possibility of some kind of review trip early in April.

Task 2 - Yucca Mountain Geochemical Technical Assistance

- o Progress to date is satisfactory.
- o Letter report LR-287-25 "Review of Reactions of . . . Tuff with J-13 Well Water . . . UCRL - 53442 . . ." has been received. I have given a copy to both John Bradbury and Linda Kovach. If they have any comments they will contact you directly.

Task 3 - Salt Sites Geochemical Technical Assistance

- o Progress to date is satisfactory.
- o The following salt documents are being sent under separate cover:
 1. "Petrography of the Artesia Group . . ." OF-WTWI-1985-42) Volumes 1 & 2

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OFFICE :							
NAME :	D. Brooks						
DATE :	86/03/03						

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2. "Characterization . . . of the Ogallala Aquifer . . ." (OF-WTWI-1985-34)
3. "Diagenesis of the San Andres Formation . . ." (OF-WTWI-1985-41)
4. "Geology and Geohydrology of the Palo Duro Basin . . ." (OF-WTWI-1985-30)
5. "Investigation . . . of Fracture Zones . . . in the Palo Duro Basin . . ." (OF-WTWI-1985-36)
6. "Hydrologic Testing . . . Salt Dissolution . . . Palo Duro Basin . . ." (OF-WTWI-1985-35)
7. "Stratigraphy and Influence of Porosity . . ." (OF-WTWI-1985-19)
8. "Clay Mineralogy" (OF-WTWI-1985-45)
9. "Petrography and Geochemistry of the Artesia Group . . ."

Each of these documents should be entered into the data base, and prioritized for review. The review priority should be discussed with Walt Kelly.

Task 4 - Short-Term- Technical Assistance

- o Progress to date is satisfactory.
- o Enclosure 1 is short-term T.A. request number 33 (Review of Thermodynamic vs Empirical . . .")
- o The following generic documents are being sent under separate cover. Please distribute and include them in the data base (as you see fit).
 1. "Transport Processes . . ."
 2. "Prediction of Movement of Radionuclides . . ."
 3. "Influence of Americium . . ."
 4. "Solubility of Plutonium Compounds . . ."
 5. "Solution Species of Plutonium . . ."

Task 5 - Project Management

- o Progress to date is satisfactory.

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- o I appreciated receiving the updated list of ORNL reports.
- o Attached (for your information) are:
 1. ASTM Meeting Trip Report - Engineering Branch (Enclosure 2), and
 2. Sandia FIN A-1756 monthly report for December, which includes a report on the meeting of the Chemical Thermodynamics Advisory Committee meeting (which was held 17 December) (Enclosure 3).

The action taken by this letter is considered to be within the scope of the current contract (NRC-50-19-03-01/FIN B-0287). No changes to cost or delivery of contracted products is authorized. Please notify me immediately if you believe that this letter would result in changes to cost or delivery of contracted products.

Sincerely,

Original Signed By

David J. Brooks
 Geochemistry Section
 Geotechnical Branch
 Division of Waste Management
 Office of Nuclear Material
 Safety and Safeguards

FC	:	WMGT	:	:	:	:	:	:
NAME	:	DBrooks/lw	:	:	:	:	:	:
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Enclosure 1

SHORT-TERM TECHNICAL ASSISTANCE TASK ORDER NUMBER 33

FIN NO/CONTRACTOR B-0287/ORNL

REQUEST DATE: Feb. 28, 1986

CONTRACT TITLE: Technical Assistance in Geochemistry Review

TASK TITLE: Review of Thermodynamic (comprehensive) and Empirical Approaches
to Determining Geochemical Retardation Factors

ESTIMATED LEVEL OF EFFORT: 2 staff weeks

REQUESTED COMPLETION DATE: May 15, 1986 (Draft)

PRODUCT DESCRIPTION: Letter Report

TASK DESCRIPTION: The review should evaluate the benefits and the deficiencies of both approaches. The letter report should contain a table to summarize the results so that each approach can easily be compared with the other. The text should provide the justification for the information contained in the tables. A definition of thermodynamic and empirical should be included. This work should be discussed with both John Bradbury and me before it begins.