

OAK RIDGE NATIONAL LABORATORY
OPERATED BY MARTIN MARIETTA ENERGY SYSTEMS, INC.

WM DOCKET CONTROL
CENTER

POST OFFICE BOX X
OAK RIDGE, TENNESSEE 37831

June 11, 1985

Dr. D. J. Brooks
Geotechnical Branch
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
623-SS
Washington, D.C. 20555

'85 JUN 14 A11:19

WM-RES
WM Record File
B0287
ORNL HL

WM Project 10,14,16
Docket No. _____
PDR ✓
LPDR ✓ (B, N, S)

Distribution:

Brooks
Still
(Return to WM, 623-SS) Joan-Licket

Dear Dave:

Enclosed is the progress report for the month of May 1985 for B0287, "Technical Assistance in Geochemistry," and copies of LR-287-3, "Review of 'The Potential of Natural Analogues in Assessing Systems for Deep Disposal of High-Level Radio-active Waste,' by N. A. Chapman, I. G. McKinley, and J. A. T. Smellie, IER-Bericht Nr. 545, 1984," and LR-287-4, "Review of 'The Dissolution of Rainier Mesa Volcanic Tuffs, and Its Application to the Analysis of the Groundwater Environment,' MS Thesis of M. S. Henne, University of Nevada, Reno, NV, 1982."

As requested in your letter of May 23, 1985, we have reviewed the draft site technical positions (STP) on hydrazine and the topical report on brine migration in salt. Our specific comments are noted on the enclosed copy of the STP and the topical report. More general comments on the topical report are discussed in LR-287-5, "Review of 'Brine Migration in Salt,' by W. Kelly," (copy enclosed).

Sincerely,

Susan
Susan K. Whatley, Manager
Repository Licensing Analysis
and Support
Chemical Technology Division

8507120012 850611
PDR WMRES EXIORNL
B-0287 PDR

SKW:bek

Enclosures:

1. Monthly Progress Report for May 1985
2. LR-287-3
3. LR-287-4
4. Draft STP
5. LR-287-5
6. Draft Topical Report

cc w/encl. 1: Office of the Director, NMSS (Attn: Program Support Branch)
Division Director, NMSS Division of Waste Management (2)
M. R. Knapp, Chief, Geotechnical Branch
R. J. Starmer, Geochemistry Section, Geotechnical Branch
Branch Chief, Waste Management Branch, RES
W. D. Arnold
J. T. Bell
J. G. Blencoe
N. H. Cutshall
L. M. Ferris
J. R. Hightower
G. K. Jacobs
A. D. Kelmers
D. C. Kocher
A. P. Malinauskas
R. E. Meyer
R. G. Wymer
SKW File (2)

2175

MONTHLY PROGRESS REPORT FOR MAY 1985

PROJECT TITLE: Technical Assistance in Geochemistry

PROJECT MANAGER: S. K. Whatley

PROJECT STAFF: J. G. Blencoe, G. K. Jacobs, A. D. Kelmers, and R. E. Meyer

ACTIVITY NUMBER: ORNL #41 37 54 92 4 (FIN No. B0287)/NRC #50 19 03 01

TECHNICAL HIGHLIGHTS:

Task 1 - BWIP Geochemical Technical Assistance

The final draft of the topical report, "Review and Assessment of Information on Geochemical Conditions at Hanford, Washington, Candidate HLW Repository Site," was forwarded to the NRC Project Manager for final review prior to publication.

The NRC Site Technical Position, "Use of Hydrazine to Experimentally Simulate Expected Site Redox Conditions and Reactions," for the DOE high-level waste reference repository location at the Hanford Site was received and circulated to the technical staff for review.

Task 2 - NNWSI Geochemical Technical Assistance

No activity this month.

Task 3 - Salt Geochemical Technical Assistance

We have reviewed the EA comment 3-16 and have no record of the reference in our original EA comments. The technical staff estimates it would take several days of library research to find additional references to support the meta-stable existence of lignite and pyrite under oxidizing conditions.

Task 5 - Project Management

The geochemistry data base has been loaded on the INQUIRE system and the data entries are being checked. Evaluations of the documents in the data base are continuing (see LR-287-3, LR-287-4, and LR-287-5 attached). The draft of the letter report on americium is approximately 50% complete.

MEETINGS AND TRIPS: None

REPORTS AND PUBLICATIONS: None

PROBLEM AREAS: None

COST/BUDGET REPORT:

Expenditures were \$24.3K for April 1985 and \$237.6 K for FY 1985. A detailed cost/budget report will be sent under separate cover.