

Sandia National Laboratories

Albuquerque, New Mexico 87185

WM DOCKET CONTROL
CENTER

December 1, 1984

'84 DEC 17 A11:49

Mr. Walton Kelly
U.S. Nuclear Regulatory Commission
Mail Stop 623-SS
Washington, DC 20555

Dear Mr. Kelly:

Enclosed is the monthly report for FIN A-1756, Geochemical
Sensitivity Analysis for November 1984.

Please feel free to contact me if you have any questions or
comments.

Sincerely,

Malcolm D. Siegel

Malcolm D. Siegel
Waste Management Systems
Division 6431

MDS:6431:jm

Enclosure

Copy to:
Office of the Director, NMSS
Attn: Program Support
Robert Browning, Director
Division of Waste Management (2)
Malcolm R. Knapp
Division of Waste Management
John Starmer
Division of Waste Management
Office of Research, NRC
Document Control Center,
Division of Waste Management
6431 R. M. Cranwell
6431 M. D. Siegel
1500 W. Herrmann
1510 J. W. Nunziato
1512 J. C. Cummings
1512 K. L. Erickson

WM-RES

WM Record File

A-1756

SNL

Distribution:

Kelly

STILL

(Return to WM, 623-SS)

WM Project 10, 11, 16

Docket No. _____

PDR ✓

LPDR B, N, S

Jean-Ticket

L3

8501070320 841201
PDR WMRES EXISANL
A-1756 PDR

1730

PROGRAM: Geochemical Sensitivity
Analysis

FIN#: A-1756

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/01/84 -
9/30/85

DRA PROGRAM MANAGER: W. R. Kelly BUDGET AMOUNT: 267.6K

CONTRACT PROGRAM MANAGER: R. M. Cranwell FTS PHONE: 844-8368

PRINCIPAL INVESTIGATOR: M. D. Siegel FTS PHONE: 846-5448

PROJECT OBJECTIVES

The objective of this project is to provide technical assistance to the NRC in determining the sensitivity of far-field performance assessment calculations to uncertainties in geochemical and hydrological input data and in the representation of geochemical processes in transport models. In Task I, the error in model calculations of integrated radionuclide discharge due to speciation, kinetic and sorption effects will be evaluated. In Task II, the potential importance of organic molecules and colloids will be examined. SNLA will assist the NRC in determining how geochemical processes should be represented in transport models under Task III. Short-term technical assistance will be carried out under Task IV.

ACTIVITIES DURING NOVEMBER 1984

Task I Uncertainty in Integrated Radionuclide Discharge

Subtask IA. Speciation Effects (M. Siegel)

A draft of a report describing available compilations of thermochemical data, availability and quality of thermochemical data for actinides and fission products and recommended criteria for the selection of "best" data for the compilation prepared under FIN A-1756 was completed this month. The document is currently under revision and will be included in the next quarterly progress report.

Subtask IB. Equilibrium Sorption Effects (M. Siegel, A. Trujillo)

The critical review of experimental sorption data for tuff continued during November. An investigation of the capabilities of the dBase III data management system (Ashton

Other Activities

A letter report describing calculations examining the sensitivity of radionuclide discharge to reaction rates was completed this month. This activity was started under funding from FIN A-1158 and was completed under FIN A-1756. The report is included in the FY84 progress report for FIN A-1756.

Funding Breakdown for November

Task I - 98%
Task II - 2%

A-1756
1646.010
November 1984

THIS IS AN ESTIMATE ONLY AND MAY NOT MATCH THE INVOICES SENT TO
NRC BY SANDIA'S ACCOUNTING DEPARTMENT.

	Month	Current Year-to-Date
I. Direct Manpower (man-months of charged effort)	1.5	3.8
II. Direct Loaded Labor Costs	18.0	41.0
Materials and Services	1.0	1.0
ADP Support (computer)	0.0	0.0
Subcontracts	16.0	30.0
Travel	1.0	2.0
Other	<u>1.0</u>	<u>2.0</u>
TOTAL COSTS	37.0	76.0

Other = rounding approximation by computer

III. Funding Status

Prior FY Carryover	FY85 Projected Funding Level	FY85 Funds Received to Date	FY85 Funding Balance Needed
67.6K	267.6K	200K	None