

Sandia National Laboratories

Albuquerque, New Mexico 87185

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October 14, 1985

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Neil M. Coleman
Hydrology Section
Geotechnical Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
7915 Eastern Avenue
Silver Spring, MD 20910

WM-RES
WM Record File
A-1158
SNC

WM Project 10, 11, 16
Docket No. _____

PDR W

LPDR B, N, S

Distribution: _____
Coleman Jean Tillet
STILL
(Return to WM, 623-SS) _____ J3

Dear Mr. Coleman:

Enclosed is the monthly report on FIN A-1158, Repository Site Description and Technology Transfer for September 1985. Please feel free to contact me if you have any questions or comments.

Sincerely,

Robert M. Cranwell
Robert M. Cranwell, Supervisor
Waste Management Systems
Division 6431

RMC:6431:jm

Enclosure

Copy to:
Office of the Director, NMSS
Attn: Program Support
Robert Browning, Director
Division of Waste Management
Malcolm R. Knapp
Division of Waste Management
Enrico Conti, Branch Chief
Health Siting & Waste Management Division
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Earth Sciences
6400 R. C. Cochrell
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6431 R. M. Cranwell
6431 G. F. Wilkinson

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PDR WMRES EXISANL
A-1158 PDR

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PROGRAM: Repository Site Definitions; FIN#: A-1158
Short-term Technical Assistance Tasks I, III

CONTRACTOR: Sandia National Laboratories BUDGET PERIOD: 10/84 - 9/85

NMSS PROGRAM MANAGER: N. M. Coleman BUDGET AMOUNT: \$90K

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

PRINCIPAL INVESTIGATOR: G. F. Wilkinson FTS PHONE: 844-0074

PROJECT OBJECTIVE

To develop reference repositories in media other than bedded salt (i.e., basalt, domed salt, welded tuff, and granite).

ACTIVITIES DURING SEPTEMBER 1985

The camera-ready copy of the RSD for unsaturated tuff was completed and hand-delivered to Neil Coleman during his visit to Sandia on September 23-24. Also delivered were written responses to comments made by the NRC on the draft RSD.

As mentioned, Mr. Coleman visited the Sandia staff in Albuquerque to discuss project objectives and to gain a greater understanding of the history of FIN A-1158.

A revised proposal (189) is being prepared in response to the revised statement of work (SOW) for FIN A-1158 which was transmitted by the NRC. The SOW was rewritten to incorporate the computer code maintenance activities which were previously performed under FIN A-1166.

PROGRAM: Technology Transfer FIN#: A-1158
Task II

CONTRACTOR: Sandia National Laboratories BUDGET PERIOD: 10/84 -
9/85

NMSS PROGRAM MANAGER: N. M. Coleman BUDGET AMOUNT: \$239K

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

PRINCIPAL INVESTIGATOR: G. F. Wilkinson FTS PHONE: 844-0074

PROJECT OBJECTIVE

To insure through technical support, problem definition, and documentation the timely, thorough, and efficient transfer of the information, analysis techniques, and analysis tools developed for the U.S. Nuclear Regulatory Commission (NRC) by the methodology program.

ACTIVITIES DURING SEPTEMBER 1985

TOUGH

During August, Dr. Pruess completed a sample problem on two dimensional infiltration with gravity. Work on the two remaining unfinished sample problems (flow to a geothermal well; infiltration in a layered medium) continued. Additional minor modifications were made in the TOUGH code. A first draft of the user's guide is nearing completion.

Progress in the project has been impeded by hardware problems in this period of changeover of LBL's computer systems. Dr. Pruess had planned that by this time several people at LBL should be using the TOUGH code regularly for their work, so that hidden bugs or problems might be discovered. Such a testing period would seem extremely valuable to assure best performance for the code eventually to be delivered to the National Energy Software Center. In the interest of accomplishing such testing, Dr. Pruess advises that it would be desirable to postpone the final completion date of the project further, beyond the current goal of November 30, 1985.

We have discussed this matter with the NMSS PM and, consequently, are preparing a no-cost extension for Dr. Pruess' contract. This no-cost extension is not expected to delay delivery of the final product.

In September testing of the TOUGH program continued. Dr. Pruess and staff discovered and fixed a number of minor bugs, and added informative printout to aid the user in identifying potential trouble spots in input data. The draft manual went through another round of editorial revisions, and Dr. Pruess advises that a preliminary typeset version should be available shortly. Work continued on the remaining sample problems.

SWIFT II STC

In your October 2, 1985, response to the August monthly progress report, tentative delivery dates are provided for the following SWIFT II products:

User's Manual/Data Input Guide - 12/85
Theory and Implementation Document - 12/85
Self-Teaching Curriculum - 2/86

A-1158, Tasks I and III
 0976.020
 September 1985

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

	Current Month	Year-to-Date
I. Direct Manpower (man-months of charged effort)	0.0	0.5
II. Direct Loaded Labor Costs	0.0	5.0
Materials and Services	0.0	2.0
ADP Support (computer)	0.0	0.0
Subcontracts*	-8.0	40.0
Travel	0.0	0.0
Other	<u>0.0</u>	<u>0.0</u>
TOTAL COSTS	-8.0	47.0

Other = rounding approximation by computer

III. Funding Status

Prior FY Carryover	FY85 Projected Funding Level	FY85 Funds Received to Date	FY85 Funding Balance Needed
None	90K	90K	None

* Subcontractor charges represent a credit from Energy Mgmt. &
 Tech. for \$7906.

A-1158, Task II
 0976.010
 September 1985

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

	Current Month	Year-to-Date
I. Direct Manpower (man-months of charged effort)	0.6	21.7
II. Direct Loaded Labor Costs	2.0	19.0
Materials and Services	0.0	0.0
ADP Support (computer)	0.0	0.0
Subcontracts*	57.0	113.0
Travel	0.0	0.0
Other	<u>0.0</u>	<u>0.0</u>
TOTAL COSTS	59.0	132.0

Other = rounding approximation by computer

III. Funding Status

Prior FY Carryover	FY85 Projected Funding Level	FY85 Funds Received to Date	FY85 Funding Balance Needed
172K	239K	67K	None

A-1158

TOTAL FOR 0976.010 and 0976.020

September 1985

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

	Current Month	Year-to-Date
I. Direct Manpower (man-months of charged effort)	0.6	22.2
II. Direct Loaded Labor Costs	2.0	24.0
Materials and Services	0.0	2.0
ADP Support (computer)	0.0	0.0
Subcontracts	49.0	153.0
Travel	0.0	0.0
Other	0.0	0.0
TOTAL COSTS	51.0	179.0

Other = rounding approximation by computer

III. Funding Status

Prior FY Carryover	FY85 Projected Funding Level	FY85 Funds Received to Date	FY85 Funding Balance Needed
172K	329K	157K	None