

A-1158

PDR-1  
LPOR-WM-101  
WM-112  
WM-160

Sandia National Laboratories

Albuquerque, New Mexico 87185

WM DOCKET CONTROL CENTER

February 15, 1987

'87 APR -6 P1111

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  
SNL

WM Project 10,11,16  
Docket No. \_\_\_\_\_  
PDR  \_\_\_\_\_  
LPOR B, N, S

Distribution: Coleman  
Jean Titus  
\_\_\_\_\_  
(Return to WM, 623-SS)

Dear Mr. Coleman:

Enclosed is the monthly report on FIN A-1158, Repository Site Definition and Technology Transfer for January 1987. Please feel free to contact me at FTS 844-8368 or Charlene Harlan at FTS 844-8164 if you have any questions or comments.

Sincerely,

*Robert M. Cranwell*

Robert M. Cranwell, Supervisor  
Waste Management Systems  
Division 6431

RMC:6431

Enclosures

Copy to:  
Office of the Director, NMSS  
Attn: Program Support  
Robert Browning, Director  
Division of Waste Management  
Philip Justus  
Division of Waste Management  
Enrico Conti, Branch Chief  
Division of Waste Management  
Atef Elzeftawy  
Health Siting & Waste Management Division  
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6400 R. C. Cochrell  
6430 N. R. Ortiz  
6431 R. M. Cranwell  
6431 C. P. Harlan  
6431 G. F. Wilkinson

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PDR WMRES EXISANL  
A-1158 PDR

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MANAGEMENT TECHNICAL ISSUES:

As of to-date no FY87 funding has been received for A1158. Because it is inappropriate to incur costs in anticipation of funding, there must be a work stoppage on this project. Staff will be reassigned to other projects and may not be available in the future to continue with A1158 tasks.

PROGRAM: Task I, Repository Site Definitions

FIN#: A-1158

CONTRACTOR: Sandia National Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: N. M. Coleman

BUDGET AMOUNT: - 0 -

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATOR: C. P. Harlan

FTS PHONE: 844-8164

PROJECT OBJECTIVE

To develop RSDs for candidate host media and provide data for use in developing and testing performance assessment methodologies for the various media.

ACTIVITIES DURING JANUARY 1987

No activity.

PROGRAM: Task II, Technology Transfer

FIN#: A-1158

CONTRACTOR: Sandia National Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: N. M. Coleman

BUDGET AMOUNT: \$135K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATOR: C. P. Harlan

FTS PHONE: 844-8164

#### PROJECT OBJECTIVE

To provide technical support for the transfer of the capability to use the information, analytical techniques, and tools developed for the NRC under the Performance Assessment Methodology program (FIN A-1266).

#### ACTIVITIES DURING JANUARY 1987

##### TOUGH User's Guide

A draft of the TOUGH User's Guide was forwarded to Karsten Pruess at LBL. This copy of the report contained comments from all reviewers. In addition, a copy of the formal reviewer and referee comments was included. Once these comments have been incorporated into the report, Sandia management sign-off may begin.

##### NEFTRAN User's Manual

Work continued on the NEFTRAN report during January 1987. The sample problems from Section 5 were re-run and camera-ready figures produced. The next phase of this task is to provide sections containing notations and references followed by an internal review. In response to your letter dated February 3, 1987, at this time it is not possible to provide a delivery date for a first draft of the report due to lack of funding.

PROGRAM: Task III, Maintenance of Computer Codes

FIN#: A-1158

CONTRACTOR: Sandia National Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: N. M. Coleman

BUDGET AMOUNT: \$180K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATOR: C. P. Harlan

FTS PHONE: 844-8164

#### PROJECT OBJECTIVE

To implement a quality assurance program to maintain computer codes, report errors, document changes, and inform the NRC staff.

#### ACTIVITIES DURING JANUARY 1987

The current version of STEPWISE resides on Sandia's VAX computer system. STEPWISE is a multiple regression program used in sensitivity analysis. The code had previously been revised from a FORTRAN 66 to a FORTRAN 77 code on the VAX. The sample problem from the User's Guide (SAND79-1472) was rerun during January and results in the report reproduced. A copy of the code was moved to the NOS/CDC computer system where the Quality Assurance (QA) library QUALIB is maintained. We are currently encountering machine dependencies in the conversion of the code to the CDC environment. Once these problems have been resolved, STEPWISE will be available for transmittal to INEL.

PROGRAM: Task IV, Code Validation and Verification      FIN#: A-1158

CONTRACTOR: Sandia National Laboratories      BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER:      N. M. Coleman      BUDGET AMOUNT: \$45K

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

PRINCIPAL INVESTIGATOR: C. P. Harlan      FTS PHONE: 844-8164

**PROJECT OBJECTIVE**

To assemble the various tests that have been performed to help validate and verify various portions of relevant codes and recommend any additional feasible tests.

**ACTIVITIES DURING JANUARY 1987**

SWIFT II Verification/Validation

A draft copy of the report "SWIFT II Verification and Validation: A Survey of Previous Tests and Recommendations for Future Work" was sent to NRC. During January, additional review from Sandia staff was received. During February these comments will be incorporated into the report and a final copy sent to NRC.

PROGRAM: Task V, Short-term Technical Assistance

FIN#: A-1158

CONTRACTOR: Sandia National Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: N. M. Coleman

BUDGET AMOUNT: \$20K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATOR: C. P. Harlan

FTS PHONE: 844-8164

PROJECT OBJECTIVE

To provide general technical assistance on waste management matters relating to Tasks I-IV.

ACTIVITIES DURING JANUARY 1987

No activity.

A-1158, Task I, Repository Site Definition  
0976.010  
January 1987

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 ---	0.0 ---
II. Direct Loaded Labor Costs	0	0
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	0	0
Travel	0	0
Other (computer roundoff)	0	0
G & A	0	0
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TOTAL COSTS	0	0

A-1158, Task II, Technology Transfer  
0976.020  
January 1987

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 ---	1.8 ---
II. Direct Loaded Labor Costs	5	12
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	25	55
Travel	0	0
Other (computer roundoff)	1	1
G & A	2	7
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TOTAL COSTS	33	75

A-1158, Task III, Maintenance of Computer Codes  
0976.030  
January 1987

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 ---	5.8 ---
II. Direct Loaded Labor Costs	4	44
Materials and Services	0	0
ADP Support (computer)	0	8
Subcontracts	3	57
Travel	0	0
Other (computer roundoff)	1	1
G & A	1	14
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TOTAL COSTS	9	124

A-1158, Task IV, Code Validation and Verification  
0976.040  
January 1987

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 ---	0.3 ---
II. Direct Loaded Labor Costs	0	2
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	-9	33
Travel	0	0
Other (computer roundoff)	-1	-1
G & A	0	4
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TOTAL COSTS	-10	38

A-1158, Task V, Short-term Technical Assistance  
0976.050  
January 1987

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 ---	0.0 ---
II. Direct Loaded Labor Costs	0	0
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	0	0
Travel	0	0
Other (computer roundoff)	0	0
G & A	0	0
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TOTAL COSTS	0	0

A-1158

Total for 0976.010, 0976.020, 0976.030, 0976.040 and 0976.050  
January 1987

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)	1.2 -----	7.9 -----
II. Direct Loaded Labor Costs	9	58
Materials and Services	0	0
ADP Support (computer)	0	8
Subcontracts	19	145
Travel	0	0
Other (computer roundoff)	1	1
G & A	3	25
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TOTAL COSTS	32	237

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$224K *	\$490K	\$0K	\$266K

\* \$224K carryover less approximately \$113K of FY86 expenses incurred  
but not costed out of project in FY86 leaves a balance of \$111K.