

A1165

LPDR - Wm-10 (2) PDR-1

Wm-11 (2)

Wm-16 (2)

Sandia National Laboratories

Albuquerque, New Mexico 87185

WM DOCKET CONTROL
CENTER

June 15, 1987

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Ms. Sandra Wastler
Repository Projects Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
7915 Eastern Avenue
Silver Spring, MD 20910

WM-RES
WM Record File
A1165
3NL

WM Project 10, 11, 16
Docket No. _____
PDR ✓
x LPDR ✓ (B, N, S)

Distribution:

Wastler

Loan-docket

(Return to WM, 623-SS)

Dear Ms. Wastler:

Enclosed is the summary of activities during May 1987 for FIN# A1165. If you have any questions please feel free to contact me at (FTS) 844-8368 or Robert Guzowski at (FTS) 844-3583.

Sincerely,



Robert M. Cranwell, Supervisor
Waste Management Systems
Division 6416

RMC:6416

Enclosure

Copy to:
Office of the Director, NMSS
Attn: Program Support
Robert Browning, Director
Division of Waste Management
Seth Coplan
Division of Waste Management
John Randall
Division of Radiation Programs and
Earth Sciences
6400 R. C. Cochrell
6410 N. R. Ortiz
6416 R. M. Cranwell
6416 R. V. Guzowski

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WM Project: WM-10, 11, 16

PDR w/encl

(Return to WM, 623-SS)

WM Record File: A1165
LPDR w/encl

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A-1165 PDR

3890

PROGRAM: Monitor/Review Aspects of DOE and
Other National and International
Waste Management Programs

FIN#: A-1165
Task II

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/86 -
9/87

NMSS PROGRAM MANAGER: S. Wastler

BUDGET AMOUNT: \$50K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATORS: R. M. Cranwell
R. V. Guzowski

FTS PHONE: 844-8368
FTS PHONE: 844-3583

PROJECT OBJECTIVE

To monitor and review the performance-assessment aspects of DOE and other national and international management programs.

ACTIVITIES DURING MAY 1987

R. Cranwell and R. Guzowski reviewed the "Staff Technical Position Procedures For Determination Of Anticipated Processes And Events And Unanticipated Processes And Events". The comments were sent to the NRC in the first week of June.

PROGRAM: Probability Techniques

FIN#: A-1165
Task III

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/86 -
9/87

NMSS PROGRAM MANAGER: S, Wastler

BUDGET AMOUNT: \$150K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATORS: R. M. Cranwell
R. V. Guzowski

FTS PHONE: 844-8368
FTS PHONE: 844-3583

PROJECT OBJECTIVE

To identify techniques for assigning probabilities to geologic processes and events.

ACTIVITIES DURING MAY 1987

The figures and tables in the Probability Techniques Report that require the permission of the publisher for inclusion in the report have been identified, and most of the letters to the appropriate publishers have been sent. The remainder of the letters will be sent in early June.

Work on the revised version of the Geochemistry chapter (Chapter 10) of the Probability Techniques Report is continuing. Completion of this chapter is expected in June.

Sandia recently announced that no one would be available in the patent office to review and approve SAND documents from June 15 through July 13. This development will delay completion of the Probability Techniques Report until the latter half of July.

PROGRAM: Identification And Analysis
Of Uncertainty

FIN#: A-1165
Task IV

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/86 -
9/87

NMSS PROGRAM MANAGER: S. Wastler

BUDGET AMOUNT: \$138K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATORS: R. M. Cranwell
R. V. Guzowski

FTS PHONE: 844-8368
FTS PHONE: 844-3583

PROJECT OBJECTIVE

To identify and analyse the uncertainties associated with the postclosure performance assessments of HLW repositories in geologic media.

ACTIVITIES DURING MAY 1987

Revisions to the scoping document on "Treatment Of Uncertainties In The Performance Assessment Of Geologic Radioactive Waste Repositories" are being incorporated into the report. This report will be completed in June.

A paper on the same topic is currently under review at Sandia and will be submitted for publication in the Journal Of Mathematical Geology. The authors are R. Cranwell and E. Bonano. As soon as the paper has completed Sandia review, a copy will be sent to the NRC.

R. Cranwell has been asked to give an invited paper on "Sensitivity And Uncertainty Methods For Nuclear Waste Disposal Applications" at the 1987 Winter meeting of the American Nuclear Society in Los Angeles, November 15-19. A copy of the summary for this talk will be forwarded to the NRC when completed.

PROGRAM: Integration And Application Of
Waste-Package Methodology

FIN#: A-1165
Task V

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/86 -
9/87

NMSS PROGRAM MANAGER: S, Wastler

BUDGET AMOUNT: -0-

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATORS: R. M. Cranwell
R. V. Guzowski

FTS PHONE: 844-8368
FTS PHONE: 844-3583

PROJECT OBJECTIVE

To integrate the waste package performance-assessment methodology with the SNLA methodologies and to apply the waste-package methodology to bedded salt and tuff. Where pertinent, experimental tests relevant to the models contained in the methodology will be identified, designed, and carried out.

ACTIVITIES DURING MAY 1987

None.

PROGRAM: Short-Term Technical Assistance

FIN#: A-1165
Task VI

CONTRACTOR: Sandia National
Laboratories

BUDGET PERIOD: 10/86 -
9/87

NMSS PROGRAM MANAGER: S. Wastler

BUDGET AMOUNT: \$50K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

PRINCIPAL INVESTIGATORS: R. M. Cranwell
R. V. Guzowski

FTS PHONE: 844-8368
FTS PHONE: 844-3583

PROJECT OBJECTIVE

To provide general technical assistance on waste-management matters on the request of the NMSS PM.

ACTIVITIES DURING MAY 1987

A letter report was written and sent to S. Coplan that describes the recent Sandia work on: (1) a summary of the effects on the estimated probability of renewed volcanic activity intersecting a repository at Yucca Mountain of the recent 20,000 year-old estimate of the most recent volcanism at the Lathrop Wells cone, (2) the results of calculating the radionuclide release for the initial inventory described in the Yucca Mountain environmental assessment assuming that this release was proportional to the release calculated by Link and others (1982) for their inventory, and (3) the results of a sensitivity analysis on the parameters in the equation used by Link and others to calculate release from a repository intersected by a dike.

A-1165, Task I
1183.010
May 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)	0.2 ---	3.1 ---
II. Direct Loaded Labor Costs	2	32
Materials and Services	3	9
ADP Support (computer)	0	0
Subcontracts	14	25
Travel	0	2
G&A	2	7
Other (computer roundoff)	-1 ---	0 ---
TOTAL COSTS	20**	75

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$4K*	\$125K	\$125K	-0-

* Carryover to be used for uncertainty task.

** Some of the charges on Task I relating to the uncertainty task will be transferred to Task IV when these charges have been identified.

A-1165, Task II
1183.020
May 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 ---	0.8 ---
II. Direct Loaded Labor Costs	0	11
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	1	17
Travel	0	4
G&A	0	3
Other (computer roundoff)	0	0
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TOTAL COSTS	1	35

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$51K*	\$50K	\$50K	-0-

* Carry over to be used for uncertainty task.

A-1165, Task III
 1183.030
 May 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)	0.2 ---	1.4 ---
II. Direct Loaded Labor Costs	2	26
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	-34*	-29
Travel	0	1
G&A	-3	-1
Other (computer roundoff)	0	1
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TOTAL COSTS	-35	-2

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
-0-	\$150K	\$150K	-0-

* Contracts for the members of the expert panel were closed
 and previously committed funds that were not spent were trans-
 ferred back to this task.

A-1165, Task IV
 1183.040
 May 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
G&A	0	0
Other (computer roundoff)	0	0
	---	---
TOTAL COSTS	0	0

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
-0-*	\$138K	\$138K	-0-

* funding is carryover from all tasks for FY86

A-1165, Task V
1183.050
May 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
G&A	0	0
Other (computer roundoff)	0	0
	---	---
TOTAL COSTS	0	0

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
-0-	-0-	-0-	-0-

A-1165, Task VI
1183.060
May 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)	0.2 ---	1.1 ---
II. Direct Loaded Labor Costs	2	13
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	0	0
Travel	0	1
G&A	0	1
Other (computer roundoff)	0	2
	---	---
TOTAL COSTS	2	17

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$8K*	\$50K	\$50K	-0-

* Carryover to be used for uncertainty task.

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Total for 1183.010, 1183.020, 1183.030, 1183.040, 1183.050 and 1183.060.

May 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 -----	6.4 -----
II. Direct Loaded Labor Costs	6	82
Materials and Services	3	9
ADP Support (computer)	0	0
Subcontracts	-19	13
Travel	0	8
G&A	-1	10
Other (computer roundoff)	-1	3
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TOTAL COSTS	-12	125

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$138K	\$513K*	\$375	-0-

* Includes \$138K for uncertainty task.