

**Sandia National Laboratories**

Albuquerque, New Mexico 87185

October 15, 1987

Dr. Daniel Galson  
Repository Projects Branch  
Division of Waste Management  
U.S. Nuclear Regulatory Commission  
7915 Eastern Avenue  
Silver Spring, MD 20910

Dear Dr. Galson:

Enclosed is the summary of activities during September 1987 for FIN# A1165. If you have any questions please feel free to contact me at (FTS) 844-8368 or Robert Guzowski at (FTS) 846-5448.

Sincerely,

*Robert M. Cranwell*

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  
6410 N. R. Ortiz  
6416 R. M. Cranwell  
6416 R. V. Guzowski

87326397

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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PDR WMRES EXISANL  
A-1165 PDR

PROGRAM: Licensing-Methodology Assistance

FIN#: A-1165  
Task I

CONTRACTOR: Sandia National  
Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: D. Galson

BUDGET AMOUNT: \$125K

CONTRACT PROGRAM MANAGER: R. M. Cranwell

FTS PHONE: 844-8368

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

FTS PHONE: 844-8368

FTS PHONE: 846-5448

PROJECT OBJECTIVE

To assist in the overall development and integration of the licensing assessment methodology.

ACTIVITIES DURING SEPTEMBER 1987

No activity.

A-1165, Task I  
 1183.010  
 September 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)	0.3 ---	3.8 ---
II. Direct Loaded Labor Costs	3	40
Materials and Services	0	9
ADP Support (computer)	0	0
Subcontracts	9	62
Travel	0	2
G&A	2	13
Other (computer roundoff)	1	3
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TOTAL COSTS	15	129

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$79K	\$204K	\$125K	-0-

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: D. Galson

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: 846-5448

#### PROJECT OBJECTIVE

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

#### ACTIVITIES DURING SEPTEMBER 1987

A review of the NRC's "Generic Technical Position Procedures For Determination Of Anticipated Processes And Events And Unanticipated Processes And Events" [September 1987 version] was completed. A copy of the comments will be delivered to the NRC in early October.

The paper entitled "A Proposed Validation Strategy For The U.S. DOE Office Of Civilian Radioactive Waste Management Geologic Repository Program" by N. A. Eisenberg, A. E. Van Luik, L. E. Plansky, and R. J. Van Vleet, which was presented at GEOVAL 87 (August 7-9, 1987, Stockholm, Sweden), was reviewed by P. Davis and E. Bonano. The review comments will be delivered to the NRC in early October.

A-1165, Task II  
 1183.020  
 September 1987

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	Current Month -----	Year -to- Date -----
I. Direct Manpower (man-months of charged effort)	0.2 ---	1.1 ---
II. Direct Loaded Labor Costs	2*	15
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	0	18
Travel	0	4
G&A	0	3
Other (computer roundoff)	0	0
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TOTAL COSTS	2	41

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$51K	\$101K	\$50K	-0-

\* Administrative charges.

PROGRAM: Probability Techniques

FIN#: A-1165  
Task III

CONTRACTOR: Sandia National  
Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: D. Galson

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: 846-5448

#### PROJECT OBJECTIVE

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

#### ACTIVITIES DURING SEPTEMBER 1987

A final draft of Chapters 1 through 9 of the literature review portion of the Probabilities Techniques Reports and a rough draft of the geochemistry chapter (Chapter 10) were sent to the NRC in September. Chapters 1 through 9 have been reviewed by NRC personnel, whereas Chapter 10 requires technical review.

A first draft of the extended summary of a paper entitled "Techniques For Assessing Probabilities Of Disruptive Events And Processes" by R. Cranwell and R. Guzowski was completed. This paper was invited for presentation at Waste Management 88 by James McCray, who is the executive director of Waste Management 88.

An internal Sandia memorandum by M. Berman entitled "Probability Issues In SARRP And NUREG-1150" was read for possible application to the techniques portion of the Probability Techniques Reports. This memorandum discusses the two types of subjective probabilities, the measurement of human uncertainty, the composition of personal-opinion-probabilities panels, the reduction of human uncertainty, and the judgement of intelligence versus policy. This memorandum was based on experience gained from using expert opinion in the field of reactor safety.

A-1165, Task III  
 1183.030  
 September 1987

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	Current Month -----	Year -to- Date ----
I. Direct Manpower (man-months of charged effort)	0.1 ---	4.1 ---
II. Direct Loaded Labor Costs	1	42
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	0	-17
Travel	0	1
G&A	0	2
Other (computer roundoff)	0	1
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TOTAL COSTS	1	29

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-

PROGRAM: Short-Term Technical Assistance

FIN#: A-1165  
Task IV

CONTRACTOR: Sandia National  
Laboratories

BUDGET PERIOD: 10/86 -  
9/87

NMSS PROGRAM MANAGER: D. Galson

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: 846-5448

PROJECT OBJECTIVE

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

ACTIVITIES DURING SEPTEMBER 1987

No activity.

A-1165, Task IV  
 1183.040  
 September 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)	0.1 ---	1.6 ---
II. Direct Loaded Labor Costs	1	20
Materials and Services	0	0
ADP Support (computer)	0	0
Subcontracts	6	11
Travel	0	2
G&A	1	4
Other (computer roundoff)	0	2
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TOTAL COSTS	8	39

III. Funding Status

Prior FY Carryover -----	FY 87 Projected Funding Level -----	FY 87 Funds Received to Date -----	FY 87 Funding Balance Needed -----
\$8K	\$58K	\$50K	-0-

A-1165

Total for 1183.010, 1183.020, 1183.030, and 1183.040  
September 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)	0.7 ---	10.6 ---
II. Direct Loaded Labor Costs	7	117
Materials and Services	0	9
ADP Support (computer)	0	0
Subcontracts	15	74
Travel	0	9
G&A	3	22
Other (computer roundoff)	1	7
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TOTAL COSTS	26	238

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-