

Distribution: WM-82-650

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JBMartin  
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HJMiller  
JOBunting

PDR w/o ends

3109.2/MRK/82/12/02/0

DEC 03 1982  
- 1 -

WMHL: 3109.2

MEMORANDUM FOR: Robert E. Browning, Deputy Director  
Division of Waste Management

FROM: Malcolm R. Knapp  
High-Level Waste Licensing  
Management Branch  
Division of Waste Management

SUBJECT: EARLY COMMUNICATION WITH DOE REGARDING PERFORMANCE  
ASSESSMENT

WM- 1  
PDR  
(Return to WM, 623-SS)

As per our discussion yesterday, I telephoned Carl Cooley and discussed with him the two letters which we received from Jeff Neff (attachments 1 and 2) and the content of my draft response (attachment 3). Carl agrees that initiation of the dialogue on performance assessment will be beneficial to both agencies. He has also agreed that our first discussion should be an effort to define those aspects of performance assessment to which we should assign highest priorities. We have tentatively agreed to meet in January.

This memo completes WM-82-650.

ORIGINAL SIGNED BY

Malcolm R. Knapp  
High-Level Waste Licensing  
Management Branch  
Division of Waste Management

Enclosures:  
As stated

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PDR WASTE PDR  
WM-1

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NAME	: MRKnapp: lmc	:	:	:	:	:	:
DATE	: 12/ /82	:	:	:	:	:	:



Department of Energy  
National Waste Terminal  
Storage Program Office  
605 King Avenue  
Columbus, Ohio 43201

10/10/82  
LWR  
Attachment 1

October 4, 1982

Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 9413  
Sandia National Laboratories  
Albuquerque, New Mexico 87185

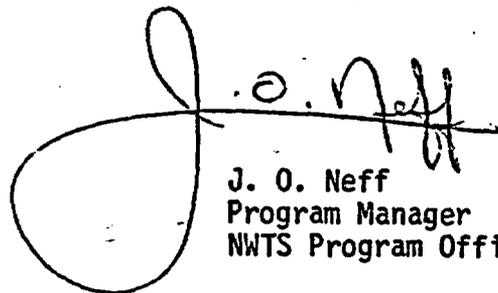
Dear Ms. Finley:

**STATUS OF PERFORMANCE ASSESSMENT PLAN AND DOCUMENTATION OF COMPUTER CODES  
FUNDED UNDER THE SCEPTER PROGRAM**

In response to your August 26, 1982 letter and since my March 22, 1982 letter to you, performance assessment within the National Waste Terminal Storage Program has shifted in emphasis from a centralized NWTS program approach to a project-oriented approach. Therefore, the general Performance Assessment Plan we expected to be available to share with the Nuclear Regulatory Commission (NRC) and NRC's contractors at this time is not available. Instead each project (i.e. BWIP, NNWSI, and ONWI) may produce their own performance assessment plan within the next year. We will contact the NRC when we have documented material to discuss.

The documentation of several performance assessment codes is due to be published in FY 83. We anticipate the first of these will be publicly available in about six months. Your name has been added to the distribution of all the final reports. We look forward to receiving your and NRC's comments on the final reports.

Sincerely,



J. O. Neff  
Program Manager  
NWTS Program Office

NPO:LAC:ds1

cc: C. Newton, DOE-HQ  
W. Ballard, DOE-HQ  
C. Cooley, DOE-HQ  
T. Longo, DOE-HQ  
L. Casey, NPO  
M. Glora, ONI  
P. Chen, ONWI  
W. Hewitt, ONWI  
G. Raines, ONWI  
A. Brandstetter, ONWI  
J. Martin, NRC  
M. Knapp, NRC  
L. Rossbach, NRC  
C. Belote, NRC  
J. Davis, NRC

ST# 473-82



Attachment 2

Department of Energy  
National Waste Terminal  
Storage Program Office  
505 King Avenue  
Columbus, Ohio 43201

March 22, 1982

Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 4413  
Sandia Laboratories  
Albuquerque, New Mexico 87115

Dear Ms. Finley:

RESPONSE TO FEBRUARY 17, 1978 REQUEST TO MEET WITH INTERA ENVIRONMENTAL CONSULTANTS

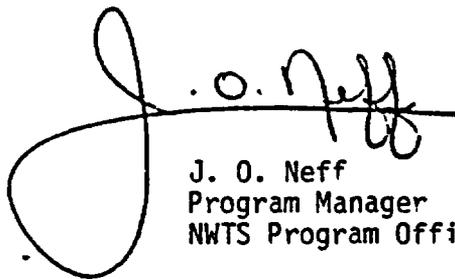
With respect to your request to L. Casey of my staff to meet with INTERA; unfortunately, to date, none of the INTERA work under its ONWI subcontract has been published in final form. Draft documents are being processed, and final reports are expected within the next 3-6 months on the following topics: model performance requirements (what processes, events, and system components have to be modeled, to what degree of detail, and with what specific equations or mathematical formulations), evaluation and selection of available models (recommendations of specific computer codes to meet the performance requirements), and proposed approaches for uncertainty analysis.

Between now and July 1982, ONWI also expects to receive draft documentation and magnetic tapes of the computer codes being recommended by INTERA. These reports and tapes will then be provided to PNL (as part of the AEGIS subcontract with ONWI) for evaluation. Following ONWI and NPO review and approval, these codes will be available to other NWTs contractors. ONWI staff wrote the first draft of a Performance Assessment Plan last fall. They are currently in the process of revising the report to incorporate input from BWIP and NNWSI in order to document a coordinated NWTs performance assessment approach. It is, therefore, premature to furnish specific information or computer codes to NRC or its contractors before an NWTs-wide consensus has been reached. Therefore, we propose to begin discussion with NRC and their contractors after this plan is available, September 1982 at the earliest.

The overall ONWI approach to performance assessment has been documented at various times, including more recently in Report ONWI-60 "Waste Isolation Performance Assessment - A Status Report", November, 1980; in Report ONWI-212, "Proceedings of the 1980 National Waste Terminal Storage Program Information Meeting", Pages 133-136, "Waste Isolation Performance Assessment"; and in Report DOE/NWTs-15, "Proceedings of the 1981 National Waste Terminal Storage Program Information Meeting", Pages 197-198, "Progress in Performance Assessment Modeling at ONWI", and Pages 199-201, "Progress in the Integration of Performance Assessment Models". Progress reports are available in the quarterly technical progress reports. Copies of all of these reports are available through the ONWI Library (614/424-7697).

We feel that the kind of up-to-the-minute information you are requesting is not appropriate for communications in the performance assessment (PA) area. It is far more important to document the work in such a way that implementation of PA is not dependent on verbal communications. We do not feel we will be able to have productive interaction with NRC and its contractors on PA until we have put in writing what our program is. We do not have resources for communication outside the program until we define our program. With that understanding I am denying your request to visit INTERA and am proposing, by copy of this letter to NRC, that we reopen this issue of meetings after DOE has sent the Performance Assessment Plan to the NRC for comment.

Sincerely,

A handwritten signature in black ink, appearing to read "J. O. Neff". The signature is stylized with a large loop on the left side and a horizontal line across the middle.

J. O. Neff  
Program Manager  
NWTs Program Office

NPO:LAC:ds1

cc: C. Newton, DOE-HQ  
W. Ballard, DOE-HQ  
J. Martin, NRC  
M. Knapp, NRC  
L. Rossbach, NRC  
C. Belote, NRC  
J. Davis, NRC  
C. Cooley, DOE-HQ  
T. Longo, DOE-HQ  
L. Casey, NPO  
A. Bradstetter, ONWI  
W. Hewitt, ONWI  
G. Raines, ONWI  
P. Chen, ONWI  
M. Glora, ONI

ST# 92-82

DISTRIBUTION: WM-82-650  
WM file  
WMHL r/f  
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JBMartin  
REBrowning  
MJBell  
MRKnapp & r/f  
Lrossbach  
HJMiller  
JOBunting

Attachment 3

3109.2/MRK/82/11/03/0

- 1 -

WMHL: 3109.2

**DRAFT**

**DRAFT**

Mr. W. Wade Ballard, Jr.  
Office of Waste Isolation  
NE-330  
US Department of Energy  
Washington, DC 20545

Dear Mr. Ballard:

I have received the March 22, 1982 and October 4, 1982 letters from Jeff Neff to Nancy Finley of Sandia National Laboratory concerning the organization of the DOE performance assessment program and access by Sandia and NRC to information on the DOE high-level waste performance assessment program. I am concerned that deferring interaction between the NRC and DOE performance assessment programs until DOE's program plans and models are documented as described in these letters will cause unnecessary delay and duplication in our respective programs. I consider that each of our performance assessment programs should maintain a good understanding of the other's ongoing work to avoid unnecessary duplication of effort and to advise each other of issues in this area early-on rather than perhaps as late as during our review of DOE's license application. In order to do this we need to know what DOE is working on currently rather than to be limited to publications of previous work. I am, of course, ready to discuss the ongoing NRC performance assessment program with DOE at your convenience.

Two areas in performance assessment which I particularly wish to review with DOE are benchmarking of computer codes and development of a data base.

NRC has an ongoing benchmarking contract to evaluate appropriate computer codes for HLW disposal, including those that NRC and DOE have developed or have been using. The results of this effort will support NRC site characterization and licensing reviews and will be a basis for selection of appropriate DOE codes for NRC use to avoid independently developing similar codes. NRC has selected several codes from the AEGIS and SCEPTER projects for benchmarking as a result of past meetings with DOE and ONWI. A list of the codes in the siting area that we are considering

**DRAFT**

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**DRAFT**

benchmarking is attached. In light of the changes in the organization of the DOE performance assessment program it may be appropriate to benchmark other codes. However, the benchmarking contract has been underway for a year now, and we must finalize our selection of siting codes which are to be benchmarked by mid-December.

To support our reviews, model development, and analyses, NRC is creating a data base for the Hanford site which we plan to expand to include NTS and salt. Most of the information in this data base will be from DOE's site characterization work. The data base is computerized to allow quick searches and summaries of the data, as well as to permit direct access of the data by appropriate computer codes. If DOE has such a system, or plans to develop one, considerable duplication of effort can be avoided by proceeding jointly. Again, this project is well underway, and in the absence of direct communication with DOE on the subject we are proceeding independently.

I would like to meet with you in the next few weeks or at the ONWI program review meeting in December to discuss how we might resolve these concerns.

Sincerely,

Michael J. Bell, Chief  
High-Level Waste Licensing  
Management Branch  
Division of Waste Management

**DRAFT**

Enclosure:  
As stated

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OFC	: WMHL:isk	: WMHL	: WMHT	: WM	:	:	:
NAME	: MRKnapp	: MJBell	: HJMiller	: JBMartin	:	:	:
DATE	: 82/11/19	: 11/ /82	: 11/ /82	: 11/ /82	:	:	:

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FROM  <b>NWTS</b>	DATE OF DOCUMENT	DATE RECEIVED	NO.	
	10/4/82	10/8/82	NM-82-650	
TO  <b>NFinley, Sandia (cc: L Rossbach)</b>	LTR.	MEMO:	REPORT:	OTHER:
	XX			
CLASSIF.: POST OFFICE REG. NO:	ORIG.:	CC:	OTHER:	
		XX		
DESCRIPTION: (Must Be Unclassified)  <b>Status of Performance Assessment Plan &amp; Docu- mentation of Computer Codes Funded under Scepter Pgm</b>	ACTION NECESSARY	CONCURRENCE	DATE ANSWERED	
	NO ACTION NECESSARY	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11/24
ENCLOSURES:  <b>CLOSED 12/3 by Memo to REBrowning From MRKnapp</b>	COMMENT	<input type="checkbox"/>	BY: 11/2	
RKS	FILE CODE:			
	3109.2			
	REFERRED TO	DATE	RECEIVED BY	DATE
	MRBell	10/8		
	MRKnapp			
	L Rossbach			

10/18/82  
LWR

LWR



**Department of Energy  
National Waste Terminal  
Storage Program Office  
505 King Avenue  
Columbus, Ohio 43201**

October 4, 1982

Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 9413  
Sandia National Laboratories  
Albuquerque, New Mexico 87185

Dear Ms. Finley:

**STATUS OF PERFORMANCE ASSESSMENT PLAN AND DOCUMENTATION OF COMPUTER CODES  
FUNDED UNDER THE SCEPTER PROGRAM**

In response to your August 26, 1982 letter and since my March 22, 1982 letter to you, performance assessment within the National Waste Terminal Storage Program has shifted in emphasis from a centralized NWTs program approach to a project-oriented approach. Therefore, the general Performance Assessment Plan we expected to be available to share with the Nuclear Regulatory Commission (NRC) and NRC's contractors at this time is not available. Instead each project (i.e. BWIP, NNWSI, and ONWI) may produce their own performance assessment plan within the next year. We will contact the NRC when we have documented material to discuss.

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Sincerely,

J. O. Neff  
Program Manager  
NWTs Program Office

NPO:LAC:ds1

cc: C. Newton, DOE-HQ  
W. Ballard, DOE-HQ  
C. Cooley, DOE-HQ  
T. Longo, DOE-HQ  
L. Casey, NPO  
M. Glora, ONI  
P. Chen, ONWI  
W. Hewitt, ONWI  
G. Raines, ONWI  
A. Brandstetter, ONWI  
J. Martin, NRC  
M. Knapp, NRC  
L. Rossbach, NRC  
C. Belote, NRC  
J. Davis, NRC

ST# 473-82

Sandia National Laboratories

Albuquerque, New Mexico 87185

August 26, 1982

J. O. Neff  
Program Manager  
NWTS Program Office  
505 King Avenue  
Columbus, OH 43201

Dear Mr. Neff:

In your letter to me dated March 22, 1982, you indicated that a coordinated NWTS performance assessment approach was being formulated. I would like to inquire about the status of this effort and when we might expect to be able to begin discussions with NWTS and its contractors regarding various computer codes. Also, I would like to know the status of the documentation of the SCEPTER program activities from INTERA. When might we be able to acquire copies of the documents relevant to this program?

As I mentioned in my letter of February 17, 1982 to L. Casey, the purpose of the discussions with any NWTS contractors is to learn the status of the programs and the features of any computer codes which have been or are being developed. It is not our intent to request any unpublished information on any ongoing programs.

I would like to thank you, in advance, for your assistance in this matter.

Sincerely,

  
Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 9413

NCF:9413:fmp

Copy to:

DOE C. Newton  
DOE W. Ballard  
NRC J. Martin  
NRC M. Knapp  
NRC L. Rossbach  
NRC C. Belote  
NRC J. Davis  
DOE C. Cooley  
DOE T. Longo  
NPO L. Casey  
ONWI W. Hewitt  
ONWI G. Raines  
ONWI P. Chen  
ONI M. Glora



Department of Energy  
National Waste Terminal  
Storage Program Office  
605 King Avenue  
Columbus, Ohio 43201

March 22, 1982

Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 4413  
Sandia Laboratories  
Albuquerque, New Mexico 87115

Dear Ms. Finley:

**RESPONSE TO FEBRUARY 17, 1978 REQUEST TO MEET WITH INTERA ENVIRONMENTAL CONSULTANTS**

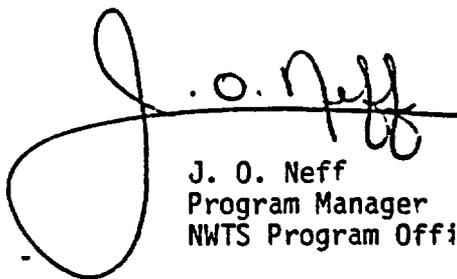
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Sincerely,

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J. O. Neff  
Program Manager  
NWS Program Office

NPO:LAC:ds1

cc: C. Newton, DOE-HQ  
W. Ballard, DOE-HQ  
J. Martin, NRC  
M. Knapp, NRC  
L. Rossbach, NRC  
C. Belote, NRC  
J. Davis, NRC  
C. Cooley, DOE-HQ  
T. Longo, DOE-HQ  
L. Casey, NPO  
A. Bradstetter, ONWI  
W. Hewitt, ONWI  
G. Raines, ONWI  
P. Chen, ONWI  
M. Glora, ONI

ST# 92-82

2/22/82  
LWR

# Sandia Laboratories

Albuquerque, New Mexico 87111

February 17, 1982

Ms. Leslie Casey  
U. S. Department of Energy  
505 King Avenue  
Columbus, OH 43201

Dear Ms. Casey:

This letter is to confirm our telephone conversation of February 16, 1982 and to specify the request that I have for a meeting with the staff of INTERA Environmental Consultants - Houston, Texas. Sandia has received a request and funding from the U. S. Nuclear Regulatory Commission (NMSS - Contract Monitor: L. W. Rossbach) to acquire information on the DOE performance assessment efforts for high level nuclear waste repository systems in various geologic media. To perform this task, we will need to obtain from DOE and its contractors, information on current and/or recently completed efforts on techniques, computer codes, etc. that are being or have been developed. One manner in which this is to be accomplished is to develop a master list of DOE contract numbers, contractors, and major technical contacts. I have discussed this process with Carl Newton at DOE headquarters and he has described to me the development of a system by DOE which could provide this information; however, this system is not expected to be operational until at least late March.

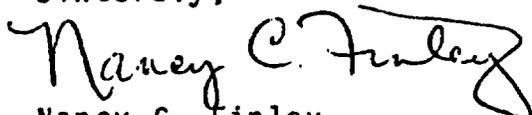
Since we would like to proceed more quickly than a late March date allows, we would appreciate the opportunity to make some contacts with major DOE contractors before this time. We are aware of INTERA's involvement in developing performance assessment techniques for DOE and would appreciate the permission to talk initially with INTERA staff, in general terms, about their existing programs. We anticipate that such a meeting would be simply an overview of their various efforts and an opportunity for us to request published information from their programs. It is not our intent to request unpublished data or reports or to discuss any financial or administrative matters about their contracts. The value of the meeting would be to allow us to become more aware of the

Ms. Leslie Casey  
U.S. Department of Energy  
Page Two  
February 17, 1982

scope and breadth of the INTERA efforts for DOE and, perhaps, to acquire some information/contacts for other DOE programs in progress at other facilities. Thus, we could proceed at making formal requests for other meetings/contacts without having to wait for contract information to become available through the system described above. I expect the key personnel from INTERA that would participate in the proposed informational meeting would be Bob Wilems, S. Pahwa and J. Pearson. There may be others of whom I am not currently aware who could provide us with useful insights.

Since we are interested in proceeding as quickly as possible in this area, we would appreciate it very much if permission could be granted for a meeting with INTERA in the near future. We look forward to more interactions with you in the future and to establishing reasonable lines of communication for receipt of information on ongoing DOE programs. Thank you very much for your attention to this matter.

Sincerely,



Nancy C. Finley  
Fuel Cycle Risk Analysis  
Division 4413  
Phone: 505-844-6059, FTS 844-6059

NCF:4413:fmp

Copy to:

DOE C. Newton  
DOE C. Cooley  
DOE T. Longo  
NRC M. Knapp  
NRC L. Rossbach  
NRC C. Belote  
NRC J. Davis  
ONWI A. Brandstetter  
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