

FEB 02 1990

LTR TO DR. PATRICK

- 1 -

Wesley C. Patrick, Technical Director
 Center for Nuclear Waste
 Regulatory Analyses
 Post Office Drawer 28510
 6220 Culebra Road
 San Antonio, Texas 78228-0510

Dear Dr. Patrick:

Subject: Performance Assessment (PA) Workshop with CNWRA and SNL

The agenda suggestions you provided by letter dated January 9, 1990, for our upcoming Performance Assessment workshop were most helpful. Your suggestion to keep the workshop small and limited to NRC, SNL and CNWRA staff was subsequently discussed with Dr. Sagar, and has been adopted. As indicated in the attached revised agenda, the additional CNWRA items you suggested have been included and the overall workshop agenda has been condensed.

You will note that the workshop is to be held in Room 6507 of the Maryland National Bank Building (MNBB), 7735 Old Georgetown Road, Bethesda, Maryland. This NRC office was selected to minimize distractions that would undoubtedly arise if the workshop was conducted in the White Flint Building. It is conveniently served by NRC shuttle and by Metro.

A follow-up session will be needed, probably in early March, to focus on workplans for Task 5 (Iterative Performance Assessment) of the Performance Assessment Element. Other conceptual and programmatic questions pertinent to performance assessment can be discussed at that time or as needed in the course of the team effort on iterative performance assessment. Possibly another workshop about six months later to discuss how the approach is working and to make FY91 plans might be considered.

Both Mel Silberberg and I look forward to constructive interactions in the upcoming sessions as the Performance Assessment Program takes shape.

15/
 Ronald Ballard, Chief
 Geosciences & Systems Performance Branch
 Division of High-Level Waste Management, NMSS
 Office of Nuclear Material Safety
 and Safeguards

Enclosure:
 PA Workshop Agenda

cc: B. Sagar, CNWRA
 M. Silberberg, WMB/DE

9002070182 900202
 PDR WASTE PDC
 WM-11

SEE NEXT PAGE FOR CONCURRENCE AND DISTRIBUTION.

Delete: ACNW

1
 WM-1
 426.1
 NH18

LTR TO DR. PATRICK

- 2 -

DISTRIBUTION

Central Files
RBrowning, HLWM
RBallard, HLGP
JKennedy, HLPD
DBrooks, HLGP
RRentschler, SGTR
BStiltenpole, PMDA
MMace, DC
LSS

HLGP r/f
BJYoungblood, HLWM
JLinehan, HLPD
PAltomare, HLEN
PBrooks, HLGP
MSilberberg, RES
SFortuna, PMDA
SCopian, HLGP
BThomas, HLGP

NMSS r/f
JBunting, HLEN
MDelligatti, HLPD
JPearring, HLEN
JCook, SGTR
Wott, RES
JFunches, PMDA
PDR & LPDR

OFC : HLGP *ppb* : HLGP *se* : ~~HLGP~~ : ~~WMB/DE~~ : PMDA :
 NAME: PBrooks/cj/ga: SCopian : ~~RLBallard~~ : ~~MSilberberg~~ : SFortuna :
 Date: 2/2/90 : 2/2/90 : 2/2/90 : ~~2/2/90~~ : ~~1/90~~ : 1/90

Telephone Conference

OFFICIAL RECORD COPY

0016



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JAN 30 1990

NOTE TO Participants/ Observers

THRU: Joseph Holonich, Section Leader
Systems Engineering & Special Projects Section
Repository Licensing & Quality
Assurance Project Directorate, HLWM

FROM: Brian E. Thomas, Project Manager
Systems Engineering & Special Projects Section
Repository Licensing & Quality
Assurance Project Directorate, HLWM

SUBJECT: FORTHCOMING WORKSHOP WITH THE CNWRA AND SNL ON PERFORMANCE
ASSESSMENT

DATE & TIME: February 15-16, 1990
8:00 a.m. - 5:00 p.m.

LOCATION: Maryland National Bank Building (MNBB)
7735 Old Georgetown Road
Bethesda, Maryland
Room No. 6507

PURPOSE: The performance assessment workshop is intended to:
(1) review the progress on performance assessment
methodologies being developed by the staff, the Center for
Nuclear Waste Regulatory Analyses (CNWRA) and Sandia
National Laboratory (SNL); 2) provide for integration of
ideas on performance assessment; and 3) set the
stage for future work under the NMSS/RES Memorandum of
Understanding - Phase 2, iterative performance assessment.
A copy of the agenda is enclosed.

PARTICIPANTS/
OBSERVERS: NRC

RBallard	MSilberberg	SCoplan
NEisenberg	RCodell	JPark
WFord	PBrooks	DChery
PJustus	JPohle	JRandall
TMcCartin	TMarguilies	JBradbury
KChang	RWeller	MNataraja
DBrooks	JTrapp	

PARTICIPANTS/
OBSERVERS:

CNWRA

WPatrick
BSagar
RWeiner, et al

SNL

PDavis
MGoodrich
DGallegos



Brian E. Thomas, Project Manager
Systems Engineering & Special Projects Section
Repository Licensing & Quality
Assurance Project Directorate, HLWM

Enclosure: As stated

cc: R. Bernero
R. Browning
B.J. Youngblood
J. Linehan
J. Holonich
J. Bunting
J. Funches
S. Fortuna
J. Pearing
M. Delligatti
D. Brooks
P. Altomare
J. Kennedy
W. Ott, RES

AGENDA

Enclosure

PERFORMANCE ASSESSMENT WORKSHOP
FEBRUARY 15 - 16, 1990
MARYLAND NATIONAL BANK BUILDING - ROOM 6507

Thursday, February 15, 1990, 8:30 am - 4:00 pm

- 8:30 a.m. 1. Introductions (5 minutes)
- 8:35 a.m. 2. Workshop Objectives and Agenda (5 minutes)
- 8:40 a.m. 3. MOU PA Exercise (3 hours)
- Overview
- Scenario Analysis
- Consequence Modeling
- System Modeling
- Sensitivity Analysis
- A Sampling of Auxilary Analyses
- Two-dimensional flow analysis of the
 one-dimensional model used
- Gas Pathway Analysis
- 11:40 a.m. Lunch
- 1:00 p.m. 4. SNL PA Technology (3 hours)
- Summary of SNL PA Technology
- Overview of the SNL PA Methodology
- Discussion of Components
- 4:00 p.m. Adjourn

Friday, February 16, 1990, 8:30 a.m. - 5:00 pm

- 8:30 a.m. 5. CNWRA PA Technology (3 hours)
- (a) Overview of CNWRA PA Activities
- (b) CNWRA Approach to Total System Performance Assessment
- (c) Engineered Barrier System Performance Assessment (EBSPAC)
- Description of EBSPAC
- Possible use in Phase 2
- Sensitivity/Uncertainty Analysis Methodology

- 11:30 p.m. Lunch
- 1:00 p.m. 6. CNWRA Subsystem PA (1 hour)
- (a) Discussion of the PA Aspects of Substantially Complete Containment and Fractional Release
 - (b) Site Subsystem - Groundwater Travel Time
 - (c) Interface of Total System PA
- 2:00 p.m. 7. Future Plans for MOU, Phase 2 - Iterative PA (2 hours)
- (a) Objective and Scope of Phase 2 - Iterative PA
 - (b) Discussion of Roles of NRC Staff, CNWRA, and SNL
 - (c) Scheduled SNL Deliveries
 - (d) Scope of Technology Transfer
 - (e) Utilization of Computers
- 4:00 p.m. 8. Conclusion and Action Items (1/2 hour)
- (a) Priority Work
 - (b) Plans for Additional Workshops
- 4:30 p.m. Adjourn

Center for Nuclear Waste Regulatory Analyses

P.O. DRAWER 28510 • 6220 CULEBRA ROAD • SAN ANTONIO, TEXAS, U.S.A. 78228-0510
(512) 522-5160 • FAX (512) 522-5155

January 9, 1990
Contract No. NRC-02-88-005
Account No. 20-3702-065

U. S. NUCLEAR REGULATORY COMMISSION
ATTN: Mr. Ronald Ballard
Office of Geosciences & Systems Performance Branch
Mail Stop - 4H3
11555 Rockville Pike
Rockville, MD 20852

U. S. NUCLEAR REGULATORY COMMISSION
ATTN: Mr. Mel Silberberg
Office of Nuclear Regulatory Research
Mail Stop - NL5260
5650 Nicholson Lane
Rockville, MD 20814

Subject: Performance Assessment (PA) Workshop

Dear Messrs. Ballard and Silberberg:

To fully meet the objectives of the Performance Assessment Workshop stated in the January 2 memorandum of Ballard to Browning, we suggest that two (rather than one) PA workshops be held in quick succession - possibly within six to eight weeks of each other. We propose that the first workshop scheduled for February 15 - 16 focus on information gathering on MOU, EBSPAC, and SNL technology transfer. In short, the first workshop will provide an assessment of the work done to date and set the stage for the second workshop.

The second workshop should focus on conceptual and programmatic questions pertinent to performance assessment. Issues such as: (1) overall strategy for PA and PA Review; (2) how complicated the PA models should be; (3) relationship between research and PA models; (4) interfaces between system and subsystem models; (5) derivation of PA data base from site and engineering data bases; (6) deterministic versus stochastic models; (7) modeling of scenarios; and (8) validation of PA models. The second workshop should result in guidelines for planning long range PA work.

We also propose that independent consultants to review theoretical PA aspects be involved in the second workshop only, thus limiting the first workshop to NRC, CNWRA and SNL staff. SNL may elect to not participate in the second workshop.



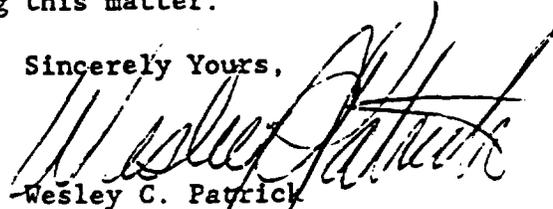
Washington Office • Crystal Gateway One, Suite 1102 • 1235 Jefferson Davis Hwy. • Arlington, Virginia, 22202-3293

9001190231⁽⁴⁾

Mr. Ballard
Mr. Silberberg
Page 2
January 9, 1990

Suggestions for the agenda of the first PA workshop (February 15 - 16) to be held in the White Flint building is attached. You may consider holding the second PA workshop at the CNWRA in San Antonio. We look forward to participating in the workshop(s). Please contact Dr. Budhi Sagar at (512) 522-5252 if you have any questions regarding this matter.

Sincerely Yours,



Wesley C. Patrick
Technical Director

cc: J. Funches ✓
S. Fortuna ✓
B. Stiltenspole ✓
W. Ott ✓
M. Mace ✓
B. Thomas ✓
J. Pearring ✓
P. Brooks ,
J. Latz
CNWRA Directors
CNWRA Element Managers
S. Boyanowski

PROPOSED AGENDA FOR THE FIRST PERFORMANCE ASSESSMENT WORKSHOP ON
FEBRUARY 15 - 16 AT THE WHITE FLINT BUILDING, WASHINGTON, D. C.

1. Introductions (10 minutes)
2. Workshop Objectives and Agenda (10 minutes)
3. MOU PA Exercise (3 1/2 hours)
 - (a) Objectives and Overall Concepts
 - (b) Summary Description of Technology Used
 - (c) Results and Lessons Learned
 - (d) Scope of Future Iterations - New Data, New Models?
 - (e) Technology Transfer
4. SNL PA Technology (3 hours)
 - (a) Summary of SNL PA Technology
 - (b) Scope of Technology Transfer
 - (c) Mechanics of Technology Transfer - Computer Codes, Documents
 - (d) Schedule/Budget for Technology Transfer
5. CNWRA EBS PA Technology (2 hours)
 - (a) Description of EBSPAC
 - (b) Possible use in Next Iteration
 - (c) Sensitivity/Uncertainty Analysis Methodology
 - (d) Technology Transfer
6. Future PA Technology (3 hours)
 - (a) Subsystem PA
 - (i) Engineered Barriers - Substantial Containment and Fractional Release Rate
 - (ii) Site Subsystem - Ground Water Travel Time

(b) Total System PA - Cumulative Release (CCDF)

(i) Expected Conditions

(ii) Disruptive Scenarios

- Change in Parameters

- Change in Geometry

- Change in Processes

(c) Scope of Second PA Workshop

7. Conclusion and Action Items (1/2 hour)

Document Name:
BALLARD-TRAVEL

Requestor's ID:
ABRUSCAT

Author's Name:

Document Comments:

Document Name:
NMSS POD

Requestor's ID:
ABRUSCAT

Author's Name:
COLLINS

Document Comments:
NMSS Plan of the Day