

June 6, 1995

Mr. Ronald A. Milner, Acting Director  
 Office of Program Management and Integration  
 Office of Civilian Radioactive Waste Management  
 U.S. Department of Energy  
 1000 Independence Avenue, SW  
 Washington, DC 20585

SUBJECT: SUMMARY FROM THE MARCH 29, 1995, TECHNICAL EXCHANGE  
 ON GROUNDWATER TRAVEL TIME

Dear Mr. Milner:

The purpose of this letter is to transmit the summary for the March 29, 1995, technical exchange between the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy (DOE). Representatives from the State of Nevada, affected units of local government, and DOE program participants also participated in the technical exchange.

Should you have any questions regarding this summary, please contact Mr. David Brooks (301/415-7284) of my staff.

Sincerely,

John H. Austin, Chief  
 Performance Assessment and Hydrology Branch  
 Division of Waste Management  
 Office of Nuclear Material Safety  
 and Safeguards

Enclosure: As stated

cc: See attached list

**DISTRIBUTION:** [PLEASE NOTATE W/ OR W/O ENCL OR ATT]

Central File                      DWM r/f-w/                      MFederline-w/o                      JSurmeier-w/                      NMSS r/f  
 PUBLIC                                  PUBLIC                                  ACNW                                  LSS                                  CNWRA  
 On-Site Reps                      MDelligatti

DOCUMENT NAME: S:\DWM\PAHB\JAP\MARC29TE.JAP

OFC	PAHB JP	PAHB DB	E	PAHB JA	E			
NAME	JPohle/km	DBrooks		JAustin				
DATE	4/27/95	4/13/95		6/6/95		1/95		1/95

OFFICIAL RECORD COPY

ACNW: YES  NO   
 IG : YES  NO   
 LSS : YES  NO

Delete file after distribution: Yes  No

9506120370 950606  
 PDR WASTE  
 WM-11 PDR

102.2  
 WM-11  
 NH/4

Attached list for letter to Ronald A. Milner dated: June 6, 1995

cc: R. Loux, State of Nevada  
J. Meder, Nevada Legislative Counsel Bureau  
W. Barnes, YMPO  
C. Einberg, DOE/Washington, DC  
M. Murphy, Nye County, NV  
M. Baughman, Lincoln County, NV  
D. Bechtel, Clark County, NV  
D. Weigel, GAO  
P. Niedzielski-Eichner, Nye County, NV  
B. Mettam, Inyo County, CA  
V. Poe, Mineral County, NV  
W. Cameron, White Pine County, NV  
R. Williams, Lander County, NV  
L. Fiorenzi, Eureka County, NV  
J. Hoffman, Esmeralda County, NV  
C. Schank, Churchill County, NV  
L. Bradshaw, Nye County, NV  
W. Barnard, NWTRB  
R. Holden, NCAI  
A. Mendez, NIEC  
S. Brocoum, YMPO  
R. Arnold, Pahrump, NV  
M. Stellavato, Nye County, NV

## DOE/NRC TECHNICAL EXCHANGE ON GROUNDWATER TRAVEL TIME

March 29, 1995  
Washington, D. C.

On March 29, 1995, staff from the U.S. Nuclear Regulatory Commission (NRC), the Department of Energy (DOE), NRC and DOE program participants, the State of Nevada, and affected units of local government conducted a technical exchange to discuss implementation of the groundwater travel time (GWTT) performance objective of 10 CFR Part 60. The technical exchange was accomplished via videoconference linking DOE headquarters in Washington, D. C. with other facilities in Las Vegas, Nevada and Albuquerque, New Mexico. The agenda is Attachment A; Attachment B is the list of attendees.

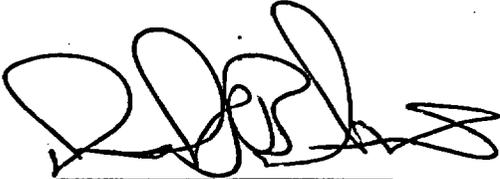
The presentation made by the NRC centered on the intent of GWTT in 10 CFR Part 60 and possible approaches to demonstrate compliance. Presentations by DOE centered on clarifying the regulatory implications of DOE's technical approach to GWTT presented at the previous technical exchange on GWTT held in December 1994 and subsequent revisions to DOE's technical approach in response to discussions between respective staff at the aforementioned technical exchange.

This technical exchange provided the first opportunity for the NRC staff to view DOE's revised calculational approach to GWTT. The NRC staff believes that DOE's proposed approach merits serious consideration through more detailed study. The acceptability of DOE's calculational approach will ultimately depend on the technical validity of the approach and its consistency with the intent of the GWTT performance objective of 10 CFR Part 60. With respect to demarcating the extent of the disturbed zone, it was the NRC's view that DOE's proposed approach would require complicated analyses that include consideration of the effects of heat generated by emplaced waste on the performance of the overall repository system; perhaps over a time period of thousands of years. The NRC staff expressed the view that the intent of the disturbed zone concept is to require consideration of heat generated by emplaced waste on the performance of the geologic setting, in the context of GWTT, rather than on the performance of the overall repository system. Further, the NRC staff expressed the view that because the intent of GWTT is to evaluate the ability of the geologic setting to contain radioactive waste for a 1,000 year period, information about the effect of heat generated by emplaced waste on the geologic setting over time in excess of 1,000 years is not needed to demarcate the extent of the disturbed zone.

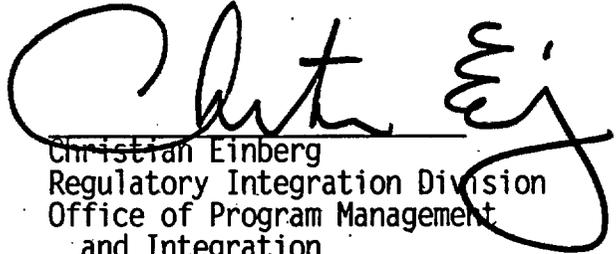
Finally, it was generally agreed that the technical exchange represented a progressive step in communication and exchanging ideas related to implementing GWTT. DOE and NRC staff hold similar views that the videoconference format

Enclosure

was an efficient and effective method to accomplish this technical exchange. Both DOE and NRC agreed that these technical exchanges on GWTT should continue as necessary as specific topics arise.



David Brooks  
Performance Assessment and  
Hydrology Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards  
U.S. Nuclear Regulatory Commission



Christian Einberg  
Regulatory Integration Division  
Office of Program Management  
and Integration  
Office of Civilian Radioactive  
Waste Management  
U.S. Department of Energy

**Attachment A**

**AGENDA**

**DOE/NRC TECHNICAL EXCHANGE  
GROUND-WATER TRAVEL TIME**

**MARCH 29, 1995  
12:00 - 4:00PM**

**SCOPE:**

Discussion of DOE's calculational approaches to pre-waste-emplacment ground-water travel time (GWTT). The discussions will be directed toward the handling of the disturbed zone and short travel times.

**OBJECTIVE:**

The objective of the exchange is to discuss the implications of the suggestions made by the NRC staff at the DOE/NRC exchange that was held in November/December 1994 concerning the implementation of GWTT. It will include clarification of the regulatory implications of the approach that the DOE presented at that exchange.

**AGENDA:**

Opening Statements	ALL
Perspectives on Aspects of Demonstrating Compliance with the GWTT Performance Objective of 10 CFR Part 60	NRC
Clarification of the Regulatory Implications of DOE's November/December Approach to GWTT	DOE
Revised DOE GWTT Calculational Approach	DOE
Open Discussion	ALL
Closing Remarks	ALL

**Attachment B**

**DOE/NRC TECHNICAL EXCHANGE ON GROUND-WATER TRAVEL TIME  
VIDEOCONFERENCE**

**DOE-HEADQUARTERS & DOE-YMSCO**

3/29/95

NAME:	ORGANIZATION:	PHONE:
Chris Emberg	DOE/HQ	202-586-8869
Homi Munwalla	MTR/TRW	202-488-2306
JIM YORK	Weston	202-646-6650
Leslie Berkowitz	M&O/TRW	202-488-2309
Jim Duguid	M&O/INTERA	703-204-8851
John L. Russell	CNWRA	703/416-1129
Tim Mc Cartin	US NRC	301 415-6588
Gene Rosebroon	NEGS (retired)	301-530-1059
JEFFREY POHLE	USNRC	301-415-6703
David B. ...	USNRC	301 415 7284
Richard Cabell	NRC	415 8167
Ron Green	CNWRA	210-522-5305
Choon Quan	DOE RW-37	202 586 2834
VICTOR PALCIAUSKAS	NWTRB	703-235-4473
Ray Wallace	USGS/HQ	202-586-1244
Bill Resme	NRC	301-415-1640
JOHN H. AUSTIN	NRC	301-415-7252
Neil Coleman	NRC	415-6615
LUNDA LEHMAN	STATE OF NEVADA	(612) 894-0357
L. Ding	ACNW	301 -

## DOE-NRC TECHNICAL EXCHANGE

## GROUND-WATER TRAVEL TIME

Video Conference: Las Vegas - Wash. DC - Albuquerque

March 29, 1995

## Attendance List

NAME	ORGANIZATION
N.T. SIMMS	MDO REG/LICENSING
APRIL GIL	YMPO/AMSL
ERIC SHISTAD	YMPO/AMSL
Russell Patterson	YMPO/AMST
Bill Nelson	INTERA/PMO
Brad Mettam	Inyo County, CA
D. Scott Magorian	Converse Conclude
Dwight Hoxie	U.S.G.S.
MARTIN PIFFLIN	MAI State of Nevada
R.L. Ashley	PMO
Tim Hare	YMPO/AMSL
Carol Haulon	YMPO/AMSL
Carol JOHNSON	NEVADA
Bill Murphy	Ute County
Nick Stollander	Nye County
Dan Monlaze	Nye County
Debbie Bryan	DOE/YMPO Licensing

