

September 10, 1993

MEMORANDUM FOR: Joseph J. Holonich, Director
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management

FROM: Charlotte Abrams, Senior Project Manager
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management

SUBJECT: FORTHCOMING NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF
ENERGY (DOE) TECHNICAL EXCHANGES ON RADIONUCLIDE MIGRATION
AND NEAR-FIELD PHENOMENA RELATED TO RADIONUCLIDE RELEASES
FROM THE ENGINEERED BARRIER SYSTEM

DATE: October 13, 14, and 15, 1993

TIME: 8:00 a.m. - 5:00 p.m.

LOCATION: Los Alamos Inn
2201 Trinity Street
Los Alamos, NM
1-800-279-9279 or (505) 662-7211

PURPOSE: To hold two NRC/DOE Technical Exchanges and a laboratory
visit. On October 13, 1993, DOE and NRC will discuss recent
activities related to experimental and theoretical studies
pertaining to the migration of radionuclides at Yucca
Mountain (Enclosure 1). On October 14, discussions will
focus on experiments and computer simulations of near-field
phenomena for the Yucca Mountain repository, with the
emphasis on thermal hydraulics and releases of radionuclides
(Enclosure 2). On the morning (8:00 - 12:00) of October 15
there will be a laboratory visit** (Enclosure 3) to Los
Alamos National Laboratory (LANL).

* Meetings and technical exchanges between NRC and DOE are open to members of the public, Petitioners, intervenors, or other interested parties wishing to attend as observers pursuant to the spirit of "Open Meeting Statement of NRC Staff Policy," 43 Federal Register 28058, dated June 28, 1978, which details the open meeting policy for applicants and licensees.

** Permission to gain access to the facilities at Los Alamos National Laboratory must be obtained by contacting Ms. Ruth Sherman (LANL) at (505) 665-6335 at least 14 days prior to the laboratory visit and faxing the information listed on the enclosed site visit agenda (Enclosure 3) to her at (505) 665-6335.

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Joseph J. Holonich

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PARTICIPANTS:

NRC

C.Abrams
J.Bradbury
V.Colten-Bradley

DOE

C.Einberg
A.Simmons
T.Berjstedt

State of Nevada

C.Johnson

Affected Local Governments

M. Murphy, Nye County, NV
D. Bechtel, Clark County, NV
V. Poe, Mineral County, NV
C. Schank, Churchill County, NV
R. Williams, Lander County, NV
B. Mettam, Inyo County, CA

M. Baughman, Lincoln County, NV
F. Sperry, White Pine County, NV
P. Niedzielski-Eichner, Nye County, NV
L. Fiorenzi, Eureka County, NV
J. Hoffman, Esmeralda County, NV
L. Bradshaw, Nye County, NV

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Charlotte E. Abrams, Senior Project Manager
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management

cc: T. Hickey, NEV
S. Goldberg, OMB
D. Weigel, GAO
F. Parker, NAS
W. Barnard, NWTRB
A. Kadak, YAEC
R. Newlin, OPA

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AGENDA
U.S. DEPARTMENT OF ENERGY - U.S. NUCLEAR REGULATORY COMMISSION
TECHNICAL EXCHANGE ON RADIONUCLIDE MIGRATION

October 13, 1993
Los Alamos Inn, Los Alamos, NM
8:00 a.m. - 5:00 p.m.

Welcome/Protocol/Opening Remarks	DOE, NRC, State, Counties
Overview of radionuclide migration	DOE (Simmons)
- Philosophy of program	
- Status of studies - update of activities since September 1990 technical exchange	
- Participants	
- Purpose/scope of interaction	
Processes/conditions affecting radionuclide migration	DOE
- Advances in experimental studies of radionuclide migration	Triay
- Recent solubility results	Roberts
- Recent sorption results	Triay
Organic sorption	Kung
- Matrix diffusion affecting mobility in fracture flow conditions	Triay
Advances in theoretical studies of radionuclide migration	DOE
- Groundwater chemistry modeling	Ebinger
- Speciation models	Morris
NEA thermochemical data base	
- AFM studies to elucidate sorption	Rogers
- Surface complexation model	Leckie
- Retardation sensitivity analysis	Zyvoloski
Modeling studies	NRC
- Sorption	Turner
- Geochemical modeling	Murphy
- K_d modeling	Bradbury
Integration with TSPA	DOE (Simmons)
SCA Open Items	DOE (Simmons)
Closing Comments	DOE, NRC, State, Counties
Adjourn	

ENCLOSURE 1

AGENDA
U.S. DEPARTMENT OF ENERGY/U.S. NUCLEAR REGULATORY COMMISSION
TECHNICAL EXCHANGE ON NEAR-FIELD PHENOMENA RELATED TO RADIONUCLIDE
RELEASES FROM THE ENGINEERED BARRIER SYSTEM

October 14, 1993
Los Alamos Inn, Los Alamos, NM
8:00 a.m. - 5:00 p.m.

Welcome/Protocol/Opening remarks	DOE, NRC, State, Counties
Overview of radionuclide release studies	DOE (Simmons)
Modeling effects of heat on the saturation of rock and on the circulation of air and water vapor	Buscheck
Modeling of dripping in fractures in the heated zone	Buscheck
Modeling and experiments on water chemistry changes	Bruton
Radiation effects on environmental conditions	Von Konynenburg
Experiments on the interactions of steam and water with the components of the EBS	McCright
Modeling of coupled processes in the altered zone	Glassley
Conceptual models for releases of radionuclides from the EBS in realistic near-field environments (source term)	McIntyre
Integrated testing	Viani
Thermally driven vaporization, condensation, and flow around waste packages	NRC (Manteufel)
SCA Open Items	DOE (Simmons)
Closing Comments	DOE, NRC, State, Counties
Adjourn	

AGENDA
U.S. DEPARTMENT OF ENERGY/U.S. NUCLEAR REGULATORY COMMISSION
SITE VISIT TO LOS ALAMOS NATIONAL LABORATORY

October 15, 1993
Los Alamos National Laboratory, Los Alamos, NM
8:00 a.m. - 12:00 noon

8:00 a.m. Assemble at Building RC-1, Technical Area 48

FACILITIES TO BE VISITED:

- Atomic Force Microscopy Laboratory
- Transport Laboratory
- Caisson Facility
- Photoacoustic Spectroscopy Laboratory
- Mass Spectrometric Facilities

Pre-visit requirements:

The Laboratory visit is limited to 30 persons. At least 14 days prior to the visit, participants must provide the following information to the contacts listed below:

- 1) Full name
- 2) Birthdate
- 3) Place of Birth
- 4) Social Security Number
- 5) Citizenship

Please provide the above information by fax (#505-665-4955) to Ms. Ruth Sherman (505-665-6335) or Ms. Ines Triay (505-665-1755). At the time of the visit check-in, participants must have a picture identification which holds the exact name used to register for the visit.