

January 11, 2005

Mr. Joseph D. Ziegler, Director
Office of License Application and Strategy
Office of Repository Development
U.S. Department of Energy
1551 Hillshire Drive
North Las Vegas, NV 89134

SUBJECT: PRE-LICENSING EVALUATION OF AGREEMENTS IN "TECHNICAL BASIS DOCUMENT NUMBER 4, MECHANICAL DEGRADATION AND SEISMIC EFFECTS" AND THREE OTHER ASSOCIATED AGREEMENTS

Dear Mr. Ziegler:

In a letter dated June 17, 2004, and a follow-up letter dated July 29, 2004, the U.S. Department of Energy (DOE) submitted "Technical Basis Document (TBD) No. 4: Mechanical Degradation and Seismic Effects" in which DOE responded to questions raised by the U.S. Nuclear Regulatory Commission (NRC) concerning geomechanical characterization, preclosure stability of underground openings, and drift degradation after permanent closure pertaining to the potential repository at Yucca Mountain, Nevada.

This letter covers the 15 Repository Design Thermal-Mechanical Effects (RDTME) Key Technical Issue (KTI) Agreements addressed in this TBD (RDTME.3.02, 3.04, 3.05, 3.06, 3.07, 3.08, 3.09, 3.10, 3.11, 3.12, 3.13, 3.15, 3.16, 3.17, and 3.19). In addition to the 15 RDTME Agreements, it also addresses Comment 3 for the General (GEN) Agreement GEN.1.01 in TBD-4. Staff also considered supplemental information DOE presented in Appendix G of TBD-3 (Water Seeping into Drifts: submitted with DOE letter dated July 28, 2004) and the DOE responses to related NRC comments in reviewing the responses to RDTME.3.20 and 3.21 and GEN.1.01 Comments 83 and 97.

The NRC staff has reviewed DOE's responses to these agreements. Based on our review of the information provided, NRC staff considers these agreements closed and have no further questions at this time. Results of our review are provided in the attachment to this letter. Although these agreements are considered closed, please note that NRC will make its final determination on any issues relevant to licensing during review of any License Application.

J. D. Ziegler

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If you have any questions regarding this matter, please contact Dr. Mysore Nataraja, of my staff, at (301) 415-6695 or by e-mail to msn1@nrc.gov.

Sincerely,

/RA/

Lawrence E. Kokajko, Deputy Director
Technical Review Directorate
Division of High-Level Waste Repository Safety
Office of Nuclear Material Safety
and Safeguards

Enclosure:

NRC Staff Review of U.S. Department of Energy Technical Basis Document No. 4 Mechanical Degradation and Seismic Effects

cc: See attached list.

Letter J. D. Ziegler from L. E. Kokajko, dated: January 11, 2005

cc:

A. Kalt, Churchill County, NV	A. Elzeftawy, Las Vegas Paiute Tribe
R. Massey, Churchill/Lander County, NV	J. Treichel, Nuclear Waste Task Force
I. Navis, Clark County, NV	W. Briggs, Ross, Dixon & Bell
E. von Tiesenhausen, Clark County, NV	M. Chu, DOE/Washington, D.C.
G. McCorkell, Esmeralda County, NV	G. Runkle, DOE/Washington, D.C.
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A. Remus, Inyo County, CA	R. Dyer, DOE/ORD
M. Yarbro, Lander County, NV	J. Ziegler, DOE/ORD
S. Hafen, Lincoln County, NV	A. Gil, DOE/ORD
M. Baughman, Lincoln County, NV	W. Boyle, DOE/ORD
L. Mathias, Mineral County, NV	D. Brown, DOE/OCRWM
D. Swanson, Nye County, NV	S.A. Wade,, DOE/ORD
M. Maher, Nye County, NV	C. Hanlon, DOE/ORD
D. Hammermeister, Nye County, NV	T. Gunter, DOE/ORD
M. Simon, White Pine County, NV	A. Benson, DOE/ORD
J. Ray, NV Congressional Delegation	N. Hunemuller, DOE/ORD
B. J. Vonderheide, NV Congressional Delegation	R. L. Craun, DOE/ORD
T. Story, NV Congressional Delegation	M. Mason, BSC
R. Herbert, NV Congressional Delegation	S. Cereghino, BSC
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S. Joya, NV Congressional Delegation	E. Mueller, BSC
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R. Loux, State of NV	D. Beckman, BSC/B&A
S. Frishman, State of NV	M. Voegele, BSC/SAID
S. Lynch, State of NV	B. Helmer, Timbisha Shoshone Tribe
P. Guinan, Legislative Counsel Bureau	R. Boland, Timbisha Shoshone Tribe
R. Clark, EPA	R. Arnold, Pahrump Paiute Tribe
R. Anderson, NEI	J. Birchim, Yomba Shoshone Tribe

cc: (Continued)

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S. Kraft, NEI

J. Kessler, EPRI

D. Duncan, USGS

R. Craig, USGS

W. Booth, Engineering Svcs, LTD

C. Marden, BNFL Inc.

J. Bacocho, Big Pine Paiute Tribe of the Owens Valley

P. Thompson, Duckwater Shoshone Tribe

T. Kingham, GAO

D. Feehan, GAO

E. Hiruo, Platts Nuclear Publications

G. Hernandez, Las Vegas Paiute Tribe

K. Finrock, NV Congressional Delegation

P. Johnson, Citizen Alert

A. Capoferri, DOE/Washington, DC

J. Williams, DOE/Washington, DC

A. Robinson, Robinson-Seidler

M. Dayton, City of Las Vegas

D. Wilson, Sen. Reid's Office

L. Lehman, T-REG, Inc.

J. Donnell, DOE/ORD

R. L. Craun, OPM&E

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R. Murray, DOE/ORD

R. Holden, NCAI

C. Meyers, Moapa Paiute Indian Tribe

R. Wilder, Fort Independence Indian Tribe

D. Vega, Bishop Paiute Indian Tribe

J. Egan, Egan, Fitzpatrick, Malsch, PLLC

J. Leeds, Las Vegas Indian Center

J. C. Saulque, Benton Paiute Indian Tribe

C. Bradley, Kaibab Band of Southern Paiutes

R. Joseph, Lone Pine Paiute-Shoshone Tribe

L. Tom, Paiute Indian Tribes of Utah

E. Smith, Chemehuevi Indian Tribe

D. Buckner, Ely Shoshone Tribe

V. Guzman, Walker River Paiute

D. Eddy, Jr., Colorado River Indian Tribes

H. Jackson, Public Citizen

J. Wells, Western Shoshone National Council

D. Crawford, Inter-Tribal Council of NV

I. Zabarte, Western Shoshone National Council

S. Devlin

G. Hudlow

D. Irwin, Hunton & Williams

L. Alfano, Lincoln County

M. Henderson, Cong. J. Gibbon's Office

D. Duquette, NWTRB

J. Ziegler

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If you have any questions regarding this matter, please contact Dr. Mysore Nataraja, of my staff, at (301) 415-6695 or by e-mail to msn1@nrc.gov.

Sincerely,

/RA/

Lawrence E. Kokajko, Deputy Director
Technical Review Directorate
Division of High-Level Waste Repository Safety
Office of Nuclear Material Safety
and Safeguards

Enclosure:

NRC Staff Review of U.S. Department of Energy Technical Basis Document No. 4 Mechanical Degradation and Seismic Effects

cc: See attached list

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