



Department of Energy
Office of Civilian Radioactive Waste Management
Office of Repository Development
1551 Hillshire Drive
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QA: N/A
Project No. WM-00011

JUL 29 2004

OVERNIGHT MAIL

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Director, Division of High-Level Waste
Repository Safety
U.S. Nuclear Regulatory Commission
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TRANSMITTAL OF APPENDIX I OF THE *TECHNICAL BASIS DOCUMENT NO. 4: MECHANICAL DEGRADATION AND SEISMIC EFFECTS, REVISION 01*, ADDRESSING KEY TECHNICAL ISSUE (KTI) AGREEMENT RELATED TO REPOSITORY DESIGN AND THERMAL-MECHANICAL EFFECTS (RDTME) 3.07

Reference: Ltr, Ziegler to Director, Division of High-Level Waste Repository Safety, dtd 6/17/04 (Transmittal of TBD No. 4: Mechanical Degradation and Seismic Effects, Rev 01)

This letter transmits Appendix I of the *Technical Basis Document No. 4: Mechanical Degradation and Seismic Effects, Revision 01*, and a compact disk (CD) of this appendix. The CD contains a pdf file with 16.7 MB, and can be made publicly available. The Technical Basis Document contains a summary of the stability of repository excavations and potential mechanical degradation under the action of in situ, thermal, and seismic stresses during the preclosure and postclosure time periods and provides the context within which individual KTI agreements related to mechanical degradation and seismic effects are addressed. Appendices A – H of the Technical Basis Document were submitted as part of the referenced letter. Appendix I, *The Effect of Sustained Loading on Intact Rock Strength*, the subject of this transmittal, provides a direct response to Agreement RDTME 3.07 and addresses the effects of sustained loading on intact rock strength through a combination of static fatigue testing and numerical modeling.

The U.S. Department of Energy considers the KTI Agreement RDTME 3.07 to be addressed, and pending review and acceptance by the U.S. Nuclear Regulatory Commission, it should be closed.

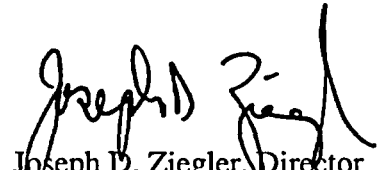
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There are no new regulatory commitments in the body or the enclosures to this letter. Please direct any questions concerning this letter and its enclosures to Carol L. Hanlon at (702) 794-1324 or e-mail carol_hanlon@ymp.gov, or Kirk D. Lachman at (702) 794-5096 or e-mail kirk_lachman@ymp.gov.


Joseph D. Ziegler, Director
Office of License Application and Strategy

OLA&S: CLH-1594

Enclosures:

1. Appendix I, *The Effect of Sustained Loading on Intact Rock Strength (Response to RDTME 3.07)*, Revision 1
2. CD of Enclosure 1

JUL 29 2004

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