



Department of Energy
Office of Civilian Radioactive Waste Management
Office of Repository Development
1551 Hillshire Drive
Las Vegas, NV 89134-6321

QA: N/A
Project No. WM-00011

AUG 12 2004

OVERNIGHT MAIL

ATTN: Document Control Desk
Director, Division of High-Level Waste
Repository Safety
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Rockville, MD 20852-2738

TRANSMITTAL OF APPENDIX N OF THE *TECHNICAL BASIS DOCUMENT NO. 5: IN-DRIFT CHEMICAL ENVIRONMENT* ADDRESSING KEY TECHNICAL ISSUE (KTI) AGREEMENT RELATED TO TOTAL SYSTEM PERFORMANCE ASSESSMENT AND INTEGRATION (TSPAI) 3.10, AND AN UNGROUPED KTI RELATED TO EVOLUTION OF THE NEAR FIELD ENVIRONMENT (ENFE) 2.07 ADDITIONAL INFORMATION NEED (AIN)-1

Reference: Ltr, Ziegler to Chief, High-Level Waste Branch (NRC), dtd 11/25/03
(Transmittal of TBD No. 5: In-Drift Chemical Environment)

This letter transmits Appendix N, *Integrated Uncertainty for Engineered Barrier System Physical and Chemical Environment* of the *Technical Basis Document No. 5: In-Drift Chemical Environment* (enclosure 1) and the response to ungrouped KTI Agreement ENFE 2.07 AIN-1, *Role of Chemical Processes, their Coupling Effects, and Bounding Conditions for In-Drift Water Compositions Affecting Drip Shield and Waste Package Corrosion* (enclosure 2).

Appendix N relates to providing the documentation of the integrated analysis and comprehensive uncertainty analysis related to the engineered barrier system physical and chemical environment in response to Agreement TSPAI 3.10. The response to Agreement ENFE 2.07 AIN-1 addresses the impact of local chemistry conditions at the drip shield and waste package.

The two documents together provide an integrated assessment of the processes that affect the drip shield and waste package and how the uncertainties with these processes are addressed within the Total System Performance Assessment for License Application.

NM5507

AUG 12 2004

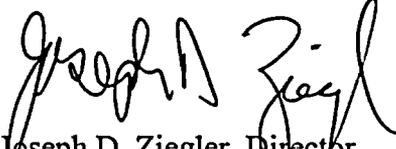
Appendices A - L of the Technical Basis Document No. 5 were submitted as part of the referenced letter. Appendix N, *Integrated Uncertainty for Engineered Barrier System Physical and Chemical Environment*, provides the response to Agreement TSPA I 3.10. One remaining appendix, Appendix M, will be transmitted by future correspondence and Technical Basis Document No. 5 will be complete.

In addition to the documents, a compact disc (CD) is included as Enclosure 3. The CD contains two pdf files, both of which can be made publicly available:

1. Appendix N with 1,453 KB, dated July 30, 2004
2. ENFE 2.07 AIN-1 with 6,873 KB, dated August 6, 2004

The U.S. Department of Energy considers the Agreements TSPA I 3.10 and ENFE 2.07 AIN-1 to be addressed, and pending review and acceptance by the U.S. Nuclear Regulatory Commission, they should be closed.

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 Joe C. Price at (702) 794-1441 or e-mail joe_price@ymp.gov, or Deborah L. Barr at (702)794-1479 or e-mail deborah_barr@ymp.gov.


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

OLA&S:JCP-1598

Enclosures:

1. Appendix N, *Integrated Uncertainty for Engineered Barrier System Physical and Chemical Environment*, Revision 1 (Response to TSPA I 3.10)
2. *Role of Chemical Processes, their Coupling Effects, and Bounding Conditions for In-Drift Water Compositions Affecting Drip Shield and Waste Package Corrosion*, Revision 1 (Response to ENFE 2.07 AIN-1)
3. CD of Enclosures 1 and 2

AUG 12 2004

cc w/encls 1, 2 and 3:

B. J. Garrick, ACNW, Rockville, MD
W. C. Patrick, CNWRA, San Antonio, TX
W. D. Barnard, NWTRB, Arlington, VA

cc w/encl 3:

D. D. Chamberlain, NRC, Arlington, TX
G. P. Hatchett, NRC, Rockville, MD
R. M. Latta, NRC, Las Vegas, NV
J. D. Parrott, NRC, Las Vegas, NV
D. B. Spitzberg, NRC, Arlington, TX
H. J. Larson, ACNW, Rockville, MD
Budhi Sagar, CNWRA, San Antonio, TX
J. R. Egan, Egan & Associates, McLean, VA
J. H. Kessler, EPRI, Charlotte, NC
M. J. Apted, Monitor Scientific, LLC, Denver, CO
Rod McCullum, NEI, Washington, DC
R. R. Loux, State of Nevada, Carson City, NV
Pat Guinan, State of Nevada, Carson City, NV
Alan Kalt, Churchill County, Fallon, NV
Irene Navis, Clark County, Las Vegas, NV
George McCorkell, Esmeralda County, Goldfield, NV
Ron Damele, Eureka County, Eureka, NV
Michael King, Inyo County, Edmonds, WA
Andrew Remus, Inyo County, Independence, CA
Mickey Yarbrow, Lander County, Battle Mountain, NV
Spencer Hafen, Lincoln County, Pioche, NV
Linda Mathias, Mineral County, Hawthorne, NV
L. W. Bradshaw, Nye County, Pahrump, NV
Mike Simon, White Pine County, Ely, NV
R. I. Holden, National Congress of American Indians, Washington, DC

cc w/o encls:

M. G. Bailey, NRC, Rockville, MD
F. D. Brown, NRC, Rockville, MD
A. C. Campbell, NRC, Rockville, MD
L. L. Campbell, NRC, Rockville, MD
N. K. Stablein, NRC, Rockville, MD