

June 25, 2004

Mr. Joseph D. Ziegler, Director
Office of License Application and Strategy
U.S. Department of Energy
Office of Repository Development
1551 Hillshire Drive
North Las Vegas, NV 89134-6321

SUBJECT: STAFF REVIEW OF INFORMATION ADDRESSING, "EVOLUTION OF THE NEAR-FIELD ENVIRONMENT" KEY TECHNICAL ISSUE AGREEMENTS 2.09, 2.11, AND 2.15, "TOTAL SYSTEM PERFORMANCE ASSESSMENT AND INTEGRATION" KEY TECHNICAL ISSUE AGREEMENT 3.13; AND "GENERAL" AGREEMENT 1.01: STATUS COMPLETE

Dear Mr. Ziegler:

In a letter dated November 25, 2003, the U.S. Department of Energy (DOE) submitted a report titled "Technical Basis Document No. 5: In-Drift Chemical Environment," (Bechtel SAIC Company, LLC, 2003a) to satisfy the informational needs of numerous Key Technical Issue (KTI) agreement items pertaining to the in-drift chemical environment and to respond to issues raised by the U.S. Nuclear Regulatory Commission (NRC) about the chemical environment on the surfaces of the waste package and drip shield at the potential repository at Yucca Mountain, Nevada. The information was requested by NRC during previous technical exchanges in September 2000, January 2001, August 2001, and September 2001. The specific agreements, which are addressed in the technical basis document, are categorized according to five different KTIs:

- (i) Evolution of the Near-Field Environment (ENFE) agreements 1.05, 2.04, 2.05, 2.06, 2.09, 2.10, 2.11, 2.13, 2.14, 2.15, and 2.17
- (ii) Container Life and Source Term (CLST) agreement 1.01
- (iii) Total System Performance Assessment and Integration (TSPAI) agreements 3.09, 3.12, and 3.13
- (iv) Thermal Effects on Flow (TEF) agreement 2.04
- (v) General (GEN) agreement 1.01, Comments 47, 50, 81, 93, 98, 104, 109, 110, 113, 118, 122, and 124

For all 17 agreements and 12 comments, DOE stated in the technical basis document that it has satisfied the NRC information needs regarding the agreements and that all agreements should be considered complete. Section 4.0 of the attached report provides the NRC evaluation of the extent to which the DOE submittal satisfies the informational requirements of four of the agreements (ENFE 2.09, 2.11, 2.15, and TSPAI 3.13) and six of the GEN 1.01

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Comments (50, 93, 98, 110, 113, and 118). NRC evaluation of the extent to which the DOE submittal satisfies the requirements of the other agreements will be provided in a separate document.

Based upon the enclosed review, the NRC staff agrees with DOE, that the information provided satisfies the intent of the agreements. Therefore, the NRC staff considers agreements ENFE 2.09, 2.11, and 2.15, TSPAI 3.13, and GEN 1.01, Comments 50, 93, 98, 110, 113, and 118 complete. If you have any questions regarding this matter, please contact Daniel Rom, of my staff at 301-415-6704 or by e-mail at dsr@nrc.gov.

Sincerely,

C. William Reamer, Director
Division of High Level Waste Repository Safety
Office of Nuclear Material Safety
and Safeguards

Enclosure:
NRC Review

cc: See attached list

J. Ziegler

-2-

Comments (50, 93, 98, 110, 113, and 118). NRC evaluation of the extent to which the DOE submittal satisfies the requirements of the other agreements will be provided in a separate document.

Based upon the enclosed review, the NRC staff agrees with DOE, that the information provided satisfies the intent of the agreements. Therefore, the NRC staff considers agreements ENFE 2.09, 2.11, and 2.15, TSPAI 3.13, and GEN 1.01, Comments 50, 93, 98, 110, 113, and 118 complete. If you have any questions regarding this matter, please contact Daniel Rom, of my staff at 301-415-6704 or by e-mail at dsr@nrc.gov.

Sincerely,

/RA/

C. William Reamer, Director
Division of High Level Waste Repository Safety
Office of Nuclear Material Safety
and Safeguards

Enclosure:
NRC Review

cc: See attached list

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Letter to J. Ziegler from C.W. Reamer, dated: June 25, 2004

cc:

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