January 24, 2003

Dr. Gordon W. Wittmeyer
Manager, Performance Assessment
Center for Nuclear Waste Regulatory Analyses
6220 Culebra Road
P.O. DRAWER 28510
San Antonio, Texas 78228-0510

SUBJECT: TRANSMITTAL OF REVISED VERSION OF THE DESCRIPTION OF THE TOTAL SYSTEM PERFORMANCE ASSESSMENT AND INTEGRATION ISSUE RESOLUTION BLUEPRINT - (IM 20.01402.761.140)

Dear Dr. Wittmeyer:

The Center for Nuclear Waste Regulatory Analyses (CNWRA) transmitted the revised version of the Total System Performance Assessment and Integration (TSPAI) Issue Resolution Blueprint on January 3, 2003. The report was received on January 7, 2003. The report fulfilled Intermediate Milestone 20.01402.761.140 when it was originally submitted. This latest submission was made in response to a request made on April 22, 2002, for changes to be made in the report.

The CNWRA has addressed adequately all but one of the Nuclear Regulatory Commission's (NRC's) previous comments on the previous revision. The changes to one comment in the blueprint — identified by the Technical Exchange Tracking Number: J-O4.1 — do not provide an accurate portrayal of that comment. The report will be accepted and released to the public after the necessary changes have been made.

The following changes are necessary before the report can be accepted:

(1) The comment should read as the corrected comment:

> The Science and Engineering Report introduces DOE plans for additional low-temperature evaluations, and DOE has indicated that the Supplemental Science and Performance Analyses (SSPA) Report, with a planned release in summer 2000, will address and provide performance assessment results for different operating temperature modes. The NRC staff is aware of these DOE plans, but may have questions relating to the evaluation of major design features after reviewing these forthcoming documents.

(2) The text for the agreement should read as follows:

> As described in the comment and indicated in the technical exchange, NRC would review the Supplemental Science and Performance Analyses and other documents that address major design features.

(3) As for making the DOE response consistent with the corrected comment and what was presented at the technical exchange, the following text should be added to the DOE response either through a footnote or square brackets. You will note that this moves the text from the comment and reference sections to the DOE response section.

> The DOE response addressed a comment that was later corrected. The comment that DOE addressed was:
>
> > Two alternative designs are considered: Backfill and a low-temperature operating mode.
> >
> > -The minimal effect of backfill on dose for vulcanism does not appear to completely capture the reduction in the number of waste packages contacted by magma.
> >
> > -Bases of assumptions for incorporation of a low-temperature operating mode into TSPA are not adequately supported.
> >
> > -It is not apparent from the analyses of low-temperature mode how uncertainties in the thermal regime and thermal effects on performance are reduced.
> >
> > References: CRWMS M&O. “Total System Performance Assessment for the Site Recommendation.” TDR-WIS-PA-000001 Revision 00 ICN 01. Las Vegas, Nevada: CRWMS M&O. 2000. Alternative Design Section, Page 4-36 to 4-40.

It should also be noted that it appears that the even pages of the “Effects of Uncertainty/Variance Partitioning” in Appendix B were inadvertently left out during reproduction of this document.

As the requested changes are relatively minor, I request that you resubmit the report by February 21, 2003, if possible.

If you have any questions, please contact Robert K. Johnson at (301) 415-6900 or (RKJ@nrc.gov) or me at (301) 415-6628 or (JRF2@nrc.gov).

Sincerely,

/RA/

James R. Firth, Element Manager
Total System Performance Assessment
and Integration KTI
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: B. Meehan, CAB1/ADM
J. Linehan, PMDA

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