

May 19, 2000

Dr. English C. Percy, Element Manager
Geohydrology and Geochemistry
Center for Nuclear Waste Regulatory Analyses
6220 Culebra Road, Building 189
San Antonio, Texas 78238-5166

SUBJECT: ACCEPTANCE OF INTERMEDIATE MILESTONE 20.01402.561.020,
"EFFECTS OF DESIGN ON COUPLED THERMAL-HYDROLOGIC-CHEMICAL
EFFECTS ON SEEPAGE AND FLOW-LETTER REPORT"

Dear Dr. Percy:

You submitted the deliverable, "Effects of Design on Coupled Thermal-Hydrologic-Chemical Effects on Seepage and Flow-Letter Report" to me by your letter dated May 3, 2000. This submission was in fulfillment of Intermediate Milestone 20.01402.561.020. The deliverable was received on May 4, 2000, one day before its due date. The U.S. Nuclear Regulatory Commission staff has completed its technical and programmatic review of the subject document. This document is acceptable and fulfills the requirements set forth in the fiscal year 2000 Operations Plans for the Evolution of the Near-Field Environment (ENFE) Key Technical Issue. However, it will be used to develop the next revision of the ENFE issue resolution status report (IRSR). Thus, the deliverable is pre-decisional and will not be made publicly available.

The letter report shows the Center has made a significant contribution to issue resolution. The Center applied the generic acceptance criteria in the Yucca Mountain Review Plan (YMRP) to the review of the U.S. Department of Energy (DOE) documents. You organized the results of your review using the integrated subissue approach adopted in the YMRP. Assumptions in DOE's Total System Performance Assessment Site Recommendation (TSPA-SR) Methods and Assumption document and in the Unsaturated Zone Flow and Transport Process Model Report were clearly identified. In addition, you very clearly described the proposed TSPA-SR approach and its deficiencies. Your evaluation of the adequacy of the information in some documents supporting TSPA-SR was thorough and excellent. You organized the review around features, events, and processes and the DOE models, abstractions, and analyses. Overall, you described what DOE actions will be necessary to achieve subissue closure. The Center's effort toward issue resolution, as documented in the deliverable, is much improved compared to last year's effort.

The deliverable provided the path forward for the Center's review activities and how the deliverable related to the YMRP. Please ensure that the generic acceptance criteria discussion reflects the current YMRP concepts (*e.g.*, model support should be used instead of model verification). There are two areas that you need to address in the Center's input to the ENFE IRSR. First, your major milestone deliverable should reflect the recommendations contained in the external peer review of the Total System Performance Assessment Version 3.2 Code. Second, the results from any quality assurance observation audit reports of analysis model reports reviewed in the deliverable should be explicitly addressed in the document.

E. Percy

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I have already provided the author with detailed comments on a hard copy of the deliverable. Those comments should be considered as you prepare the Center's input to the ENFE IRSR. If you or the author of the deliverable have any questions, please contact me at (301) 415-6652.

Sincerely,
/RA/

Bret W. Leslie
Program Element Manager
High-Level Waste & Performance
Assessment Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: J. Linehan
B. D. Meehan

E. Pearcy

-2-

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cc: J. Linehan
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