January 2, 2002

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: ACCEPTANCE OF IM 20.01402.762.200, "TRANSMITTAL OF THE

SOFTWARE REQUIREMENTS DESCRIPTION FOR THE TPA VERSION 5.0

CODE"

Dear Dr. Wittmeyer:

The Center for Nuclear Waste Regulatory Analyses (CNWRA) transmitted the subject Intermediate Milestone (IM) on December 7, 2001. The document was transmitted on shedule, is acceptable, and fulfills the IM 20.01402.762.200 in the FY02 CNWRA Operations Plan. The document describes the modifications to be made in updating the Total-system Performance Assessment (TPA) code to version 5.0.

The acceptance is contingent upon consideration of the following items during development of TPA version 5.0, which were highlighted in the document review:

- 1. The proposed calculation of multiple dissolution rates per subarea for process-level modification NF1 could be computationally expensive. A simplified model should be incorporated which captures the ensemble response of variations in dissolution rate due to thermal variability.
- 2. The proposed process-level modification FT5 may also be computationally expensive. The significance of this modification on model output should be evaluated before inclusion into TPA Version 5.0.
- A deliquescence/evaporation model should be developed in conjunction with proposed data change DC7 to incorporate the evaporated chemical environment on the drip shield and waste package during the thermal period. This model should be coupled with temperature calculations and drift seepage to ensure consistency.

Dr. G. W. Wittmeyer

If you have any questions, please contact me at (301) 415-6628 or (jrf2@nrc.gov).

Sincerely,

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

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