

June 6, 1995

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Dr. Robert G. Baca, Manager
Performance Assessment Program Element
Center for Nuclear Waste Regulatory Analyses
Southwest Research Institute
6220 Culebra Road, Bldg. 189
San Antonio, Texas 78238-5166

SUBJECT: REVIEW OF PAPER ON NEAR-FIELD COUPLED LIQUID, VAPOR, AND HEAT
TRANSPORT: INTERMEDIATE MILESTONE 5702-723-530

Dear Dr. Baca:

On May 18, 1995, the Center for Nuclear Waste Regulatory Analyses (CNWRA) transmitted the paper entitled "Quasi-Steady State Model for Coupled Liquid, Vapor, and Heat Transport: Application to the Proposed Yucca Mountain High-Level Waste Repository." Based on our review, conducted by Rex Wescott and Tim McCartin, it was determined that this deliverable was transmitted on time and is adequate and consistent with the technical direction provided to the CNWRA. However, the transmitted paper did not include Figure 6. Therefore, the requirements of Intermediate Milestone 5702-723-530 are considered acceptably met upon re-submission of the paper with the inclusion of Figure 6.

The reviewers commented that this is an excellent example of development of a simple, abstracted model. The authors have used modeling results at a large scale to produce boundary conditions for the simple model at the waste package scale that is thus consistent with repository scale models. The simple model was used to examine specific issues with respect to the environment of a single waste package and design options (i.e., backfill). Models that can provide insights on performance related issues are extremely important and useful.

If you have any questions regarding the contents of this letter, please contact Tim McCartin at (301) 415-6681.

Sincerely,

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Timothy McCartin, Manager
Performance Assessment Program Element
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: S. L. Fortuna, PMDA
B. D. Meehan, CAB

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NAME	TMcCartin <i>TJM</i>		RWescott <i>RW</i>		NEisenberg <i>for</i>	
DATE	6/6/95		6/6/95		6/6/95	

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