

January 9, 2002

Dr. English C. Percy, Manager
Geohydrology & Geochemistry
Center for Nuclear Waste Regulatory Analyses
6220 Culebra Road
Building 189
San Antonio, TX 78228-0510

SUBJECT: REVIEW AND APPROVAL OF INTERMEDIATE MILESTONE 1402.562.210:
"MULTIFLO VERSION 1.5 USER GUIDE UPDATE" DATED DECEMBER 13, 2001

Dear Dr. Percy:

The Intermediate Milestone entitled "MULTIFLO Version 1.5 User Guide Update" (IM1402.562.210) submitted to the U.S. Nuclear Regulatory Commission (NRC) on December 13, 2001, has been reviewed by the NRC staff. This product is programmatically and technically acceptable.

I understand that this version of the code has two important improvements relative to the previous version. One improvement is the capability to assign a free-drainage condition to the lower boundary when modeling an unsaturated system, such as a potential waste repository at Yucca Mountain, Nevada. Consequently, the lower boundary can now be located above the water table, closer to the drifts, reducing the size of the system modeled and improving computational efficiency. The second improvement is the capability to simulate dual, as well as, single continuum systems. The MULTIFLO code is an important tool for investigating coupled processes in fractured rock of the near field environment to determine their impact on repository performance.

If you have any questions concerning this review, please contact me at (301) 415-6597.

Sincerely,

/RA/

John W. Bradbury
Program Element Manager
High-Level Waste Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

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