September 24, 2004

Dr. Gordon Wittmeyer, Manager Hydrology Element Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road, Building 189 San Antonio, TX 78238-5166

SUBJECT: COMPLETION OF INTERMEDIATE MILESTONE (IM 20.06002.01.131.440) "INFILTRATION IN THE UPPER SPLIT WASH WATERSHED, YUCCA MOUNTAIN, NEVADA" - JOURNAL PAPER

Dear Dr. Whittmeyer:

The U.S. Nuclear Regulatory Commission staff has completed its review of the above intermediate milestone (IM 20.06002.01.131.440) by the Center for Nuclear Waste Regulatory Analyses (CNWRA), received on September 2, 2004. This report is programmatically acceptable and for public release.

The hydrological studies documented in this report are important, and this effort by CNWRA is acknowledged and appreciated. This work is part of the ongoing CNWRA effort to develop an independent technical basis for evaluating the hydrologic conditions in the area of the proposed high-level waste repository site at Yucca Mountain, Nevada. More specifically, this work was conducted to improve understanding of surface flow and infiltration processes within a watershed above the proposed repository. The sensitivity study demonstrates which parameters were more significant in determining net infiltration rates and ultimately the percolation flux.

Under the Key Technical Issue Unsaturated and Saturated Flow Under Isothermal Conditions, this CNWRA report relates to the subissue of Present-Day Shallow Infiltration. The report focuses on the integrated subissue Climate and Infiltration (Section 4.2.1.3.5 of the Yucca Mountain Review Plan). If you have questions, please contact me at (301) 415-5845 or by e-mail at <u>hda@nrc.gov</u>.

Sincerely,

/RA/

Hans Arlt, Program Element Manager Technical Review Directorate Division of High-Level Waste Repository Safety Office of Nuclear Material Safety and Safeguards

cc: M. Leach B. Meehan B. Sagar, CNWRA Dr. Gordon Wittmeyer, Manager Hydrology Element Center for Nuclear Waste Regulatory Analyses 6220 Culebra Road, Building 189 San Antonio, TX 78238-5166

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- B. Meehan
- B. Sagar, CNWRA

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