

# Center for Nuclear Waste Regulatory Analyses

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December 19, 1991  
Contract No. NRC-02-88-005  
Account No. 20-3704-071

U. S. Nuclear Regulatory Commission  
ATTN: Dr. George F. Birchard  
Nicholson Lane Bldg. (NLS-260)  
5650 Nicholson Lane  
Rockville, MD 20852

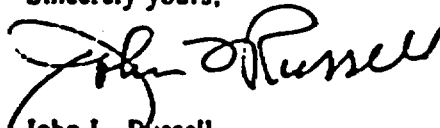
Subject: Transmittal of "Effects of Variable Hydrologic Saturation on Sorption Modeling for High-Level Waste Performance Assessment: A Literature Review" representing Intermediate Milestone No. 20-3704-071-104.

Dear Dr. Birchard:

This letter transmits the subject report, in accordance with Revision 1 (September, 1991) of the Project Plan for the Sorption Modeling for High-Level Waste Performance Assessment Research Project. The report covers literature pertinent to the effects of different parameters on sorption processes and the effect of variable hydrologic saturation on these parameters. Transport equations and sorption models for transport through the unsaturated zone are presented and their application discussed. Recent laboratory and field experiments conducted to investigate reactive transport through the unsaturated zone are described and several specific examples are discussed.

If you have any questions regarding this report, please contact me at 512/522-5183 or Dr. David Turner at 512/522-2139.

Sincerely yours,

  
John L. Russell  
Manager, Geologic Setting

DT/ps

cc:

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