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QA: N/A

OVERNIGHT MAIL

JUL 11 2002

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**TRANSMITTAL OF INFORMATION ADDRESSING KEY TECHNICAL ISSUE (KTI)
AGREEMENT ITEMS UNSATURATED AND SATURATED FLOW UNDER ISOTHERMAL
CONDITIONS (USFIC) 3.01, AND TOTAL SYSTEM PERFORMANCE ASSESSMENT AND
INTEGRATION (TSPAI) 3.19**

This letter transmits a report entitled, *Response to USFIC 3.01 and TSPAI 3.19*, addressing the subject KTI agreements. The subject KTI agreements are related to the technical basis for the Total System Performance Assessment models for climate and net infiltration. The concern is that underestimates of infiltration flux could result in an underprediction of mean annual dose.

USFIC 3.01 states: "Provide the documentation sources and schedule for the Monte Carlo method for analyzing infiltration. The U.S. Department of Energy (DOE) will provide the schedule and identify documents expected to contain the results of the Monte Carlo analyses in February 2002."

TSPAI 3.19 states: "DOE will provide justification for the use of its evapotranspiration model, and defend the use of the analog site temperature data (UZ1.3.1). DOE will provide justification for the use of the evapotranspiration model, and justify the use of the analog site temperature data. The justification will be documented in an update to the Simulation of Net Infiltration for Modern and Potential Future Climates AMR (ANL-NBS-HS-000032) and the Future Climate Analysis and Modeling Report (AMR) (ANL-NBS-GS-000008). The AMRs are expected to be available to NRC in FY 2003."

Sensitivity studies have been conducted to evaluate the importance of the net infiltration and evapotranspiration models to the demonstration that the postclosure performance objectives would be met. The sensitivity studies show that the change to the estimate of the mean annual dose is small with extreme increases in infiltration fluxes. Thus, the information that would be developed to address the USFIC 3.01 and TSPAI 3.19 agreements is not considered to be important to performance to show that the individual and groundwater protection requirements would be met. The enclosed risk information is proposed as an alternative approach to meeting the subject agreements.

Agreement Items USFIC 3.02, TSPAI 3.18, and 3.21 are also related to the net infiltration model. These agreements address the effects of surface flow on the net infiltration model. Although similar arguments can be made to address these agreements, the proposed DOE resolution in this letter does not explicitly address these agreements. Dispositioning of agreement items TSPAI 3.18 and 3.21 will be included in

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the Fiscal Year (FY) 2003 and FY 2004 KTI plan. Information addressing USFIC 3.02 was previously planned to be submitted to the U.S. Nuclear Regulatory Commission in June 2002. Submittal of this information is being re-planned to assure that it will appropriately address the agreement item.

This letter contains no new regulatory commitments. Please direct any questions concerning this letter and its enclosure to Mark C. Tynan at (702) 794-5457 or Timothy C. Gunter at (702) 794-1343.



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OL&RC:TCG-1372.

Enclosure:

Responses to USFIC 3.01 and TSPAI 3.19

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