

August 25, 2010

MEMORANDUM TO: Jack Davis, Deputy Director  
Division of High-Level Waste Repository Safety  
Office of Nuclear Material Safety  
and Safeguards

THRU: Jack Guttman, Branch Chief */RA/*  
Division of High-Level Waste Repository Safety  
Office of Nuclear Material Safety  
and Safeguards

FROM: Christopher Markley */RA/*  
Division of High-Level Waste Repository Safety  
Office of Nuclear Material Safety  
and Safeguards

SUBJECT: ISSUANCE OF A USER GUIDE FOR THE "PERFORMANCE  
ASSESSMENT: A MODEL FOR SCOPING OF OPTIONS AND  
ANALYZING RISK, BETA VERSION"

Enclosed is the staff's user's guide for the performance assessment model titled: *Performance Assessment: A Model for Scoping of Options and Analyzing Risk, Beta Version (β-SOAR), User Guide*". The β-SOAR model will be used to support scoping studies for timely development of a risk-informed and performance based regulatory program for future high-level radioactive waste repository licensing activities. It is one component of NMSS's "*Plan for Integrating Spent Nuclear Fuel Regulatory Activities*." This document will be referenced in the upcoming Commission Information Paper, scheduled for early FY-2011.

In FY-2011, the staff will begin a program to benchmark this simplified model with complex international analyses for various site characteristics (i.e., granite, clay, and potentially salt). The benchmarking depends on international cooperation for sharing geologic facility characteristics and modeling assumptions. This benchmarking activity will demonstrate the model's capability to distinguish the major risk factors for a broad range of potential sites. It will identify needs for specific upgrades to the β-SOAR model to perform estimated comparative studies. This will place the staff in an excellent position to effectively respond to the evolving national policy on high-level waste disposal and assist in developing a stable and predictable regulatory program. An update of the benchmarking activities will be provided in latter part of FY-2011. In FY-2011, the staff plans to discuss our activities with the ACRS.

Enclosure: "Performance Assessment: A Model for Scoping of Options and Analyzing Risk, Beta Version (β-SOAR), User Guide"

CONTACT: Christopher T. Markley, DHLWRS/NMSS  
(301) 492-3560

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**ADAMS NO: ML102720755**

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<b>DATE</b>	08/25/10	07/22/10	08/25/2010	09/28/10

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