



**Department of Energy**

Washington, DC 20585

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Mr. Joseph J. Holonich, Director  
Repository Licensing and Quality  
Assurance Project Directorate  
Division of High-Level Waste Management  
Office of Nuclear Material Safety  
and Safeguards  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Mr. Holonich:

Pursuant to a recent telephone request by Mr. Kenneth Hooks of your office to Mr. Thomas H. Chaney, Quality Assurance Manager, Yucca Mountain Site Characterization Project, U.S. Geological Survey (USGS), regarding the absence of technical procedures in study plans that specify software modeling development, the following information is provided.

A review of Study Plan 8.3.1.2.2.9, "Site Unsaturated Zone Modeling and Synthesis," and Study Plan 8.3.1.2.3.3, "Site Saturated-Zone Hydrologic System Synthesis and Modeling," found that the quality assurance (QA) requirements are adequately addressed.

Both study plans describe tests and methods to determine that the models are accurate and correctly applied to the natural system. The activities described in these study plans will meet the requirements in DOE/RW-0333P, Revision 0, Supplement III, 2.6 Model Validation. The results of these activities will be documented in accordance with YMP-USGS QMP-3.04, Review of Technical Publications.

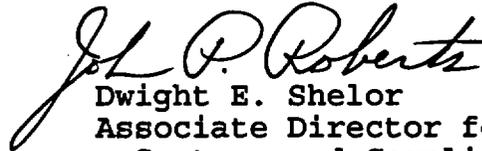
The source of data used as input to the models also is addressed in these study plans. In addition, the use of the input data will be documented in accordance with DOE's AP-5.1Q, Control and Transfer of Technical Data on the Yucca Mountain Project. Finally, the computer code for models developed as a result of these activities will be subject to the requirements of YMP-USGS QMP-3.03, Software.

These study plans clearly state under the "Quality assurance requirements" sections why technical procedures do not apply to the modeling activities described in the plans. In the USGS QA program, technical procedures are used to document routine data collection activities and they would not be appropriate for model development activities. Technical procedures or scientific notebooks will certainly be used to document the development of YMP-USGS data used as input to the models.

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If you have any questions, please call Mr. Chaney at (303) 236-1418.

Sincerely,



Dwight E. Shelor  
Associate Director for  
Systems and Compliance  
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cc:

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