



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 8, 1998

Dr. Stephan J. Brocoum
Assistant Manager for Licensing
U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P. O. Box 30307
North Las Vegas, Nevada 89036-0307

SUBJECT: ISSUE RESOLUTION STATUS REPORT (KEY TECHNICAL ISSUE: TOTAL SYSTEM PERFORMANCE ASSESSMENT AND INTEGRATION), REV. 1

Dear Dr. Brocoum:

As you know, the staff of the U.S. Nuclear Regulatory Commission (NRC) has developed a program for early resolution of technical issues at the staff level, which involves the preparation of Issue Resolution Status Reports (IRSRs). The overall goal of the Total System Performance Assessment and Integration (TSPA) Key Technical Issue (KTI) IRSR is to delineate staff's systematic approach for determining compliance with an overall system performance objective. Revision 0 of the TSPA IRSR addressed model abstraction. Enclosed is Revision 1 of the TSPA IRSR, which has been updated to reflect: (1) acceptance criteria and review methods for the subissue of scenario analysis, (2) current staff views of Key Elements of Subsystem Abstraction, and (3) changes to the U.S. Department of Energy's (DOE's) reference design and performance assessment models.

The TSPA IRSR is composed of five subissues: (1) demonstration of the overall performance objective, (2) demonstration of multiple barriers, (3) model abstraction, (4) scenario analysis, and (5) transparency and traceability. The first two of these subissues have been added in this revision of the IRSR to address demonstration of compliance with regulatory requirements that are currently under development; these subissues will be the focus of Revision 2. Acceptance criteria and review methods for transparency and traceability will be addressed in a future revision.

Concurrent with the development of this IRSR, NRC has initiated development of implementing regulations for the Yucca Mountain (YM) site with the expectation that, in the near future, the U.S. Environmental Protection Agency will issue standards for the YM site. As this rulemaking activity progresses, the results may necessitate changes to conform the TSPA IRSR to the rulemaking approach. Any changes that result from the rulemaking activity will be addressed in succeeding versions of the IRSR. Similarly, in this version of the IRSR, the staff has used information on DOE's program that was available at the time this IRSR was written. DOE's viability assessment (VA) activities have resulted in numerous changes in approach, not all of which are captured in this version. Changes in DOE's approach not documented in this version will be incorporated in later IRSR revisions.

Consistent with NRC regulations on prelicensing consultations and a 1993 agreement with DOE, staff-level issue resolution can be achieved during the prelicensing consultation period.

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this IRSR has been tentatively scheduled for January 1999. If you have any questions about this letter and enclosure, please contact James Firth of my staff at (301) 415-6628, or via Internet mail service (jrf@nrc.gov).

Sincerely,

[Original signed by:]

Michael J. Bell, Acting Chief
Performance Assessment and High-Level
Waste Integration Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

Enclosure: As stated

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OFC	PAHL									
NAME	MBell									
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U.S. Nuclear Waste Technical Review Board, State of Nevada, and other interested parties; in this context, a technical exchange on this IRSR has been scheduled for December 1998. If you have any questions about this letter, please contact James Firth of my staff at (301) 415-6628, or via Internet mail service (jrf@nrc.gov).

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Dr. S. Brocoum

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Letter to Dr. S. Brocoum from M. Bell dated: December 8, 1998

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