



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

December 28, 1999

NOTE TO: Samuel J. Collins  
FROM: Ashok C. Thadani *M. V. F. Thadani for*  
SUBJECT: TECHNICAL STUDY OF SPENT FUEL POOL ACCIDENTS FOR  
DECOMMISSIONING PLANTS

During the last year, your staff has requested our assistance in performing a generic study of spent fuel pool accidents, undertaken to develop generic, risk-informed regulatory requirements for plants that are being decommissioned. In response to their requests, we have performed in-house accident analysis in the areas of thermal hydraulics and offsite radiological consequences. We also have assisted in the areas of human error probabilities and spent fuel pool structural integrity. Finally, our senior level PRA scientist has performed an independent review of the risk assessment.

We performed thermal hydraulic analysis using computational fluid dynamics to provide insight into the ongoing one-dimensional COBRA calculations being performed by PNNL for your staff. Our preliminary thermal hydraulic results recently were provided to your staff. A November 12, 1999, memorandum forwarded the results of our analysis of offsite radiological consequences. The results of our effort on spent fuel pool structural integrity were provided by memorandum on November 19, 1999, and the results of our independent review of the PRA were provided by memorandum on November 23, 1999. Finally, based on our experience in accident analysis, including severe accident progression, we recently provided your staff with a short paper identifying further opportunity to reduce uncertainty and potentially unnecessary conservatism in the analysis of spent fuel pool accidents.

It is our understanding that your staff will not seek RES concurrence on the final report *Technical Study of Spent Fuel Pool Accidents for Decommissioning Plants* that will be released for public comment in early January 2000. In case that understanding is correct, I believe RES review and concurrence on the report should be sought to (1) ensure proper use and characterization of any RES input used in the report and (2) provide an opportunity for an independent review and feedback on the report which is likely to receive close technical scrutiny by some stakeholders.

cc: W. Travers  
F. Miraglia  
C. Paperiello

Scotch 7664 "Post-it" Routing-Request Pad

ROUTING - REQUEST

Please

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<input type="checkbox"/>	APPROVE	<u>Samuel J. Collins</u>
and		
<input type="checkbox"/>	FORWARD	<u>The 1999 PRA for a note</u>
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<input checked="" type="checkbox"/>	REVIEW WITH ME	<u>Gail</u>

*RLG*