

April 22, 2011

Dr. Said Abdel-Khalik, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: SECY-11-0024, "USE OF RISK INSIGHTS TO ENHANCE THE SAFETY
FOCUS OF SMALL MODULAR REACTOR REVIEWS"

Dear Dr. Abdel-Khalik:

I am responding to your letter from the Advisory Committee on Reactor Safeguards (ACRS or Committee) dated March 16, 2011. The letter provided conclusions and recommendations regarding your review of the subject SECY paper during the 581st meeting of the ACRS on March 10–12, 2011, and information received from the U.S. Nuclear Regulatory Commission (NRC) staff and the Nuclear Energy Institute presentations during the Future Plant Designs Subcommittee meeting on February 9, 2011.

Regarding your comments and recommendations on NUREG-0800; the design-specific review plans for integrated pressurized water reactors (iPWRs); and pilot studies regarding NUREG-1860, the NRC staff is continuing to move ahead in all these areas.

Regarding your recommendation to consider the use of a process like phenomena identification and ranking tables (PIRTs), work activities are already in progress. As part of this work, the Office of New Reactors and the Office of Nuclear Regulatory Research are identifying important phenomena and developing methods for analysis of small modular reactor (SMR) designs. Specifically, NRC staff teams have begun to conduct PIRTs on thermal-hydraulic and neutronics development activities for selected iPWRs. Additionally, an audit was conducted by NRO staff of a draft Level 1 probabilistic risk assessment for an iPWR in March 2011 in conjunction with gaining risk insights into iPWR systems, structures, and components. The staff will compare those insights with the existing Standard Review Plan (NUREG-0800) to facilitate the development of the design-specific review plans currently being prepared.

I appreciate the willingness of the ACRS to engage with the staff during the pre-application stage of SMR reviews, as this early interaction facilitates the staff's use of risk insights to enhance the safety focus on SMRs. I look forward to continued staff interactions with the Committee regarding SMR design activities.

Sincerely,

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
SECY

References

NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition"

NUREG-1860, "Feasibility Study for a Risk-Informed and Performance-Based Regulatory Structure for Future Plant Licensing"

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