August 2, 2005

Dr. Graham B. Wallis, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC  20555-0001

SUBJECT: DRAFT FINAL REGULATORY GUIDE, “RISK-INFORMED, PERFORMANCE-BASED FIRE PROTECTION FOR EXISTING LIGHT-WATER NUCLEAR POWER PLANTS”

Dear Dr. Wallis:

This is in response to your letter of June 14, 2005, which summarized the results of the Advisory Committee on Reactor Safeguards’ review of the subject draft final Regulatory Guide. We appreciate the Committee’s comments and acknowledge your concern regarding final issuance of the document in its present form. We agree with your comments and we are working with the Nuclear Energy Institute (NEI) to incorporate your recommendations in the Regulatory Guide and in the industry guidance document that is endorsed by the Regulatory Guide, NEI 04-02, “Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c).” We plan to eliminate apparent inconsistencies between the Regulatory Guide supporting 10CFR 50.48(c) and the sections in Regulatory Guide (RG) 1.174 “An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis,” which are applicable to 10 CFR 50.48(c).

In response to your recommendation that the methods used by licensees to determine the acceptability of changes be consistent with RG 1.174, NEI has agreed to revise NEI 04-02 to eliminate any inconsistencies with the applicable guidance of RG 1.174. The fire modeling approach, as well as all other approaches, to evaluating changes will require that delta core damage frequency (ΔCDF) and delta large early release frequency (ΔLERF) be estimated and shown to be acceptable in accordance with the applicable guidelines in RG 1.174.

The rule endorses National Fire Protection Association (NFPA) 805 which allows probabilistic safety assessment (PSA) methods to be one optional method for assessing a performance-based fire protection baseline program. However, NFPA 805 also requires a fire risk evaluation, which is defined as using a PSA evaluation, for evaluating the acceptability of changes. In keeping with the Commission’s policy of promoting the use of PSA, the Regulatory Guide will make it clear that PSA methods are the NRC-accepted approach for evaluating the risk acceptability of changes and that any licensee that makes changes that could increase risk using NFPA 805 must use a PSA that is of sufficient technical adequacy to quantify the risk associated with the change.

The staff will work with NEI to eliminate statements in NEI 04-02 that are inconsistent with the Commission’s policy of promoting the use of PSA methods and to ensure that parts of NEI 04-02
that the Regulatory Guide endorses use correct methodology and language. The Regulatory Guide will take exception to any parts of NEI 04-02 that do not follow this guidance.

Since NFPA 805, and as such 10 CFR 50.48(c) has already defined the Limiting Fire Scenario (LFS) and the Maximum Expected Fire Scenario (MEFS), we do not plan to provide definitions of LFS and MEFS in the Regulatory Guide supporting 10 CFR 50.48(c). However in addition to requiring that $\Delta_{CDF}$ and $\Delta_{LERF}$ be evaluated as an integral component of the fire modeling approach to evaluating changes, NEI 04-02 will include specific guidance on determining the limiting fire scenario (LFS) and maximum expected fire scenario (MEFS) as defined in NFPA 805. That guidance will include the requirement that the determination of sufficient margin between LFS and MEFS should consider the uncertainties associated with the model.

We look forward to providing a final guide and industry guidance document for review by the Advisory Committee for Reactor Safeguards in the future.

Sincerely,

/RA Marty Virgilio Acting For/
Luis A. Reyes
Executive Director
for Operations

cc: Chairman Diaz
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
SECY
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