

May 23, 2006

MEMORANDUM TO: Christopher Grimes, Director  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Mark Cunningham, Director  
Division of Fuel, Engineering & Radiological Research  
Office of Nuclear Regulatory Research

FROM: Farouk Eltawila, Director */RA/*  
Division of Risk Assessment and Special Projects  
Office of Nuclear Regulatory Research

SUBJECT: REQUEST FOR REVIEW AND COMMENT ON DRAFT NUREG  
REPORT ON A FRAMEWORK FOR INTEGRATING RISK AND  
SAFETY MARGINS

The objective of the research documented in the enclosed draft NUREG report is to establish a framework that quantifies changes in safety margins caused by a broad range of plant modifications. The framework complements the existing process, and is especially applicable for cases in which margin sufficiency is questionable and a single modification has both positive and negative safety consequences. In such a safety tradeoff case, uncertainty must be propagated explicitly because using conservative values biases risk metrics by exaggerating the negative and minimizing the positive.

In the course of developing this framework, Dr. Gavrilas of my staff has interacted with several staff members of the Office of Nuclear Reactor Regulation (NRR), most notably Drs. Gareth Parry, Marty Stutzke and Steven Long. Mr. Michael Tschiltz, deputy director of the Division of Risk Assessment, has been kept informed of the progress of this work. The NRR Leadership Team was briefed in January 2006. Cognizant staff in the Division of Safety Systems in the Directorate for Engineering and Safety Systems have also been briefed in January 2006.

In addition to any remarks and suggestions that you would like us to consider, we would appreciate receiving specific comments in a couple of areas. Can you comment on the utility of the framework in addressing safety tradeoff scenarios, and can you assess to what extent the framework adds value to the decision-making process in such cases? Also, can you identify additional developmental efforts that would enhance the applicability of the framework to current regulatory issues and suggest problems of particular interest to your directorate/division to which the framework should be applied?

We are currently scheduled to present this framework to the Advisory Committee on Reactor Safeguards (ACRS) at their 534<sup>th</sup> meeting, to be held July 12-14, 2006. We would appreciate receiving your comments by June 23, 2006 to fully consider them in our presentation to the

C. Grimes  
M. Cunningham

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ACRS. Dr. Mirela Gavrilas is available to answer questions and assist in your review. She can be reached by e-mail at [mxg5@nrc.gov](mailto:mxg5@nrc.gov), or by telephone at 415-5332.

Enclosure: As stated

C. Grimes  
M. Cunningham

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Enclosure: As stated

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