

April 29, 2002

Dr. William D. Travers  
Executive Director for Operations  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

SUBJECT: RESPONSE TO LETTER DATED MARCH 6, 2002 CONCERNING RISK-  
INFORMED ACTIVITIES IN THE OFFICE OF NUCLEAR MATERIAL SAFETY  
AND SAFEGUARDS

Dear Dr. Travers:

Thank you for your letter of March 6, 2002, in which you described the actions that the staff is taking to address issues in our report dated January 14, 2002, concerning the status of risk-informed activities in the Office of Nuclear Material Safety and Safeguards (NMSS). Your response relates to our January 14, 2002 report, resulting from the review by the Joint Subcommittee of the Advisory Committee on Reactor Safeguards (ACRS) and the Advisory Committee on Nuclear Waste (ACNW) of the proposed Standard Review Plan (SRP) Chapter 3 (NUREG-1520) for Integrated Safety Analysis (ISA). We appreciate your points of agreement. We would, however, like to offer clarification of certain issues in our January 14, 2002 report.

The ACRS and ACNW continue to view the ISA process as a stop-gap toward the more aggregated risk response provided by probabilistic risk assessment (PRA). We encourage the staff to continue its transition to risk-inform the regulatory process by more fully embracing PRA principles. We are sensitive to NRC and stakeholder concerns that the transition to a risk-informed framework might add unnecessary regulatory burden. We believe that an important reason for the licensees not performing a PRA is the perception that all risk assessments are similar to a full-scope nuclear power plant PRA. The typical nuclear power plant PRA is not representative of the risk assessment needs of most less complex process and hazardous material facilities. Furthermore, there is substantial evidence that the scope of a comprehensive, non-probabilistic safety analysis and a probabilistic risk assessment are comparable in many cases, once the capability to do such analyses is in place. The primary difference is the training and skill of the safety analysts. We recognize that there is some initial burden on both the licensee and the regulator in implementing any improvements in the analysis methods, a situation the NRC has faced many times in the process of enhancing nuclear safety regulation. To demonstrate the benefits and thereby facilitate industry adoption of a PRA approach, the NRC could sponsor the development of a simplified PRA methodology for non-reactor facilities.

We have encouraged the staff to pursue the use of risk assessment techniques consistent with the PRA Policy Statement and have focused on the need for integrated decisionmaking as described in Regulatory Guide 1.174 especially with regard to the matter of burden to the licensee and application of risk-informed concepts. The Commission's White Paper on risk-informed and performance-based regulation contributed substantially to establishing a consistent set of definitions and principles to guide the NRC's progress toward a risk-informed

regulatory environment. Given that the agency has committed to a risk-informed regulatory practice, we believe that those principles should be rooted in the fundamental principles of quantitative risk assessment as discussed in previous reports.

We look forward to discussing the methods for obtaining risk insights as the transition continues to risk-inform the regulatory process. For example, during future meetings, we would like to discuss the treatment of dependent failures, risk-informing of accident sequence sets, criteria and guidance used by licensee panels in making decisions, and the progress in adopting PRA principles.

Sincerely,

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George M. Hornberger  
Chairman

References:

1. Report dated January 14, 2002, from George M. Hornberger, Chairman, ACNW, to Richard A. Meserve, Chairman, NRC, Subject: Risk-Informed Regulation in the Office of Nuclear Material Safety and Safeguards.
2. Letter dated March 6, 2002, from William D. Travers, Executive Director for Operations, NRC, to George M. Hornberger, Chairman, ACNW, Subject: Response to Advisory Committee on Nuclear Waste Letter-Report Dated January 14, 2002, to the Commission on Risk-Informed Activities in the Office of Nuclear Material Safety and Safeguards.
3. Report dated February 14, 2000, from Dana A. Powers, Chairman, ACRS, to Richard A. Meserve, Chairman, NRC, Subject: Impediments to the Use of Risk-Informed Regulation.
4. U.S. Nuclear Regulatory Commission, NRC PRA Policy Statement, dated August 16, 1995.
5. Letter dated March 1, 1999, from Annette Vietti-Cook, Secretary of the Commission, NRC, to William D. Travers, EDO, Subject: Staff Requirements - SECY-98-144 - White Paper on Risk-Informed and Performance-Based Regulation.
6. Report dated March 26, 1998, from B. John Garrick, Chairman, ACNW, to Shirley Ann Jackson, Chairman, NRC, Subject: Risk-Informed, Performance-Based Regulation in Nuclear Waste Management.
7. U.S. Nuclear Regulatory Commission, Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," July 1998.