

March 8, 2001

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

Dear Dr. Travers:

SUBJECT: DRAFT REPORT, "REGULATORY EFFECTIVENESS OF THE  
ANTICIPATED TRANSIENT WITHOUT SCRAM RULE"

During the 479<sup>th</sup> meeting of the Advisory Committee on Reactor Safeguards, February 1-3, 2001, we met with representatives of the NRC staff to discuss the staff's draft report on the regulatory effectiveness of the anticipated transient without scram (ATWS) rule. We also discussed this matter during the 480<sup>th</sup> meeting, March 1-3, 2001. We had the benefit of the documents referenced.

We agree with the general conclusions of the draft report. As noted in our report on the Regulatory Effectiveness of the Station Blackout Rule, dated June 22, 2000, we believe the assessment of whether or not the regulatory analysis and the subsequent rulemaking are achieving the desired objectives to be an important part of the regulatory process.

The report notes the strong influence of the moderator temperature coefficient (MTC) on PWR ATWS performance and of operator actions on BWR ATWS performance. Industry initiatives to achieve longer cycles could result in insufficiently negative MTCs at full power for a larger fraction of the cycle length. Similarly, industry initiatives to uprate the power of existing BWRs could accelerate the progress of accident sequences, thus increasing the challenge to timely and appropriate operator action. Such consequences could erode the safety benefits derived from the implementation of the ATWS rule. We recommend that the approval of such fuel cycle changes and power uprates be contingent on maintaining the ATWS risk at acceptable levels.

Although this particular study answered a number of appropriate questions, we suggest that future studies of regulatory effectiveness explicitly address the following questions:

1. What contribution to risk was associated with the pertinent sequences before the rule was promulgated?
2. What level of uncertainty was attributed to the determination of the risk contribution?

3. In view of Items 1 and 2, why were these levels of risk and associated uncertainty considered unacceptable?
4. What were the target levels of risk and associated uncertainty?
5. Why were these target levels considered acceptable?
6. What plant changes were implemented as a result of the rule?
7. What reductions of risk and associated uncertainty were actually achieved by implementation of the rule?
8. What was the original regulatory analysis estimate of the cost of implementing the rule?
9. What was the actual cost associated with implementation of the rule?

We believe that answering these questions will lead to a more systematic and risk-informed assessment of regulatory effectiveness.

Sincerely,

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George E. Apostolakis  
Chairman

References:

1. Letter dated October 18, 2000, from Farouk Eltawila, Office of Nuclear Regulatory Research, NRC, to David Modeen, Nuclear Energy Institute, transmitting Draft Report, "Regulatory Effectiveness of the Anticipated Transient Without Scram Rule," by Regulatory Effectiveness Assessment and Human Factors Branch, Division of Systems Analysis and Regulatory Effectiveness, Office of Nuclear Regulatory Research, NRC.
2. Memorandum dated July 19, 1983, from William J. Dircks, Executive Director for Operations, NRC, for The Commissioners, NRC, Subject: SECY-83-293, Amendments to 10 CFR 50 Related to Anticipated Transients Without Scram (ATWS) Events.
3. Letter dated June 22, 2000 from Dana A. Powers, ACRS Chairman, to William D. Travers, Executive Director for Operations, NRC, Subject: Draft Report, "Regulatory Effectiveness of the Station Blackout Rule."