UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

July 17, 2012

The Honorable Allison M. Macfarlane
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: SECY-12-0081, "RISK-INFORMED REGULATORY FRAMEWORK FOR NEW REACTORS"

Dear Chairman Macfarlane:

During the 593rd meeting of the Advisory Committee on Reactor Safeguards, April 12-14, 2012, we completed our review of the Draft Commission Paper titled "Risk-Informed Regulatory Framework for New Reactors," dated February 3, 2012. Our April 26, 2012, letter report describes the conclusions and recommendations from our review.

In their May 30, 2012, response to our report and in the final version of SECY-12-0081, the staff disagreed with our Recommendation 5 that a fourth option should be developed for Commission consideration with regard to risk significance determinations in the Reactor Oversight Process (ROP) and other risk-informed applications. We recommended an option that would employ relative measures of the change in risk as a metric for significance, rather than the absolute measures that were applied during the staff's tabletop exercises.

In their response to our report, the staff cited their interpretation of Commission policy and guidance as a basis for their rejection of our recommendation. We have considered the staff's position and the supporting documents carefully, and we do not reach the same conclusion.

Our proposed framework is a logical extension of the current quantitative guidance for risk-informed decisions in Regulatory Guide 1.174. It also preserves a consistent, objective, and reproducible basis for regulatory oversight decisions throughout the entire fleet of currently operating reactors and expected new reactor designs. The use of relative risk measures to evaluate the significance of changes in the available safety margins is not a *de facto* imposition of lower absolute numeric safety thresholds for new reactors. Rather, our option simply proposes a continuous quantitative scale of increasing applied flexibility and a method to consistently measure whether a change in the available margin to an established goal is deemed "significant." Measurement of the significance of changes on a relative scale provides more meaningful information for regulatory decisions than the examination of very small absolute numerical values.

The use of relative risk measures to determine the significance of changes would maintain a regulatory framework that is consistently informed by quantitative evaluations of reactor safety, and it would provide an explicit expression of the Commission's expectations for increased safety and operational flexibility for new reactors. The development and use of additional deterministic backstops or other qualitative considerations to characterize the significance of reactor safety inspection findings, as proposed by the staff, would depart from the risk-informed decision process that is working well in the ROP and other regulatory applications.

We recommend that the Commission consider our proposed option during its deliberations on this topic.

We look forward to continuing our dialogue with the Commission and the staff to resolve this issue.

Sincerely,

/RA/

J. Sam Armijo
Chairman

REFERENCES

1. Letter to J. Sam Armijo, "Risk-Informed Regulatory Framework for New Reactors," EDO response to ACRS Letter Report, May 30, 2012. (ML12123A695)

2. Letter to R. Borchardt, "Draft Commission Paper, 'Risk-informed Regulatory Framework for New Reactors' ", ACRS Letter Report, April 26, 2012. (ML12107A199)

3. SECY-12-0081, "Risk-informed Regulatory Framework for New Reactors" June 6, 2012. (ML12117A012)

4. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 2, U.S. Nuclear Regulatory Commission, Washington, DC, May 2011. (ML100910006)

The use of relative risk measures to determine the significance of changes would maintain a regulatory framework that is consistently informed by quantitative evaluations of reactor safety, and it would provide an explicit expression of the Commission's expectations for increased safety and operational flexibility for new reactors. The development and use of additional deterministic backstops or other qualitative considerations to characterize the significance of reactor safety inspection findings, as proposed by the staff, would depart from the risk-informed decision process that is working well in the ROP and other regulatory applications.

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