



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

December 16, 1998

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

Dear Dr. Travers:

**SUBJECT: PROPOSED IMPROVEMENTS TO THE NRC INSPECTION AND ASSESSMENT PROGRAMS - INTERIM REPORT**

During the 458<sup>th</sup> meeting of the Advisory Committee on Reactor Safeguards, December 3-5, 1998, we reviewed the proposed changes to the NRC Inspection and Assessment Programs, including initiatives related to development of performance indicators and a risk-based inspection program. Our Subcommittees on Reliability and Probabilistic Risk Assessment, Plant Operations, and Regulatory Policies and Practices also reviewed this matter on November 20, 1998. During these reviews, we had the benefit of discussions with representatives of the NRC staff and the Nuclear Energy Institute (NEI). During our 456<sup>th</sup> meeting, September 30 - October 2, 1998, the NRC staff and NEI discussed the results of the Performance Assessment Workshop held on September 28 - October 1, 1998. We also had the benefit of the documents referenced.

In our September 10, 1997 report, we recommended that the staff utilize a top-down structure to develop the assessment process. The staff has adopted such an approach, beginning with a statement of NRC's overall safety mission, progressing to a set of Strategic Performance Areas, and resulting in the development of seven Cornerstones of Safety.

The staff established three Task Groups to propose improvements to the Inspection and Assessment Programs by making them more objective and risk informed:

- A Framework Task Group to develop details of the framework for a more objective, risk-informed, and performance-based approach to assess licensee performance and related bases for inspection activities.
- A Risk-Informed Rebaselining Inspection Program Task Group to develop a risk-informed baseline inspection program to assess nuclear power plant licensee performance.
- An Assessment Task Group to develop a process for use by the staff to make objective conclusions on licensee performance, take actions based on these conclusions in a predictable manner, and effectively communicate these results to the licensees and the public.

The staff has made significant progress since our March 13, 1998 report to the Commission. The staff is finalizing the Task Groups' reports associated with the overall framework, inspection, and assessment – including the performance indicators and thresholds for regulatory action, and the Transition Plan.

The staff is developing a set of performance indicators for evaluating normal power operations that are related to risk by accident-sequence logic, are supported by objective data that are readily available and scrutable, and are directly measurable or calculable. The relationship of the performance indicators to the risk-informed Inspection Program has been well-developed. Development of performance indicators for the areas of shutdown operations has been proposed. We understand that this work will take several months to complete.

The approach of the Risk-Informed Rebaselining Inspection Program Task Group appears to be sound. Although the baseline inspection program document is not yet complete, its organization, format, and content give indication that the staff will develop a comprehensive inspection program that is successfully linked to the Cornerstones of Safety.

A Transition Plan for implementing the revised Inspection and Assessment Programs has been developed. This Plan contains such elements as milestones, training requirements, and communication plans that are essential to a smooth transition. Each of the Regional Offices will have knowledgeable personnel for implementing the Plan. The Plan also provides for several pilot programs that are essential for successful implementation of this complex project.

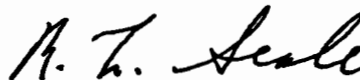
Important elements that enhanced the progress made in developing the new Inspection and Assessment Programs include:

- The use of a top-down structure to develop the assessment process.
- Improved coordination among the various NRC Offices, and the Regional Offices.
- The involvement of stakeholders in a well-organized public workshop and the continuing interactions with the nuclear industry.

Although substantial progress has been made, much work remains to be done particularly with regard to the integration of the assessment process.

We plan to continue our review of this matter during the February 1999 ACRS meeting.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. L. Seale". The signature is fluid and cursive, with the first name "R." and last name "Seale" clearly distinguishable.

R. L. Seale  
Chairman

**References:**

1. U. S. Nuclear Regulatory Commission, Draft report, "NRC Power Reactor Baseline Inspection Program," received December 1, 1998 (Predecisional), including draft NRC report sections:
  - "Barrier Integrity Cornerstone," dated November 16, 1998.
  - "Mitigating Systems Cornerstone," dated November 23, 1998.
2. U. S. Nuclear Regulatory Commission, draft report, Revision 1.1, prepared by Los Alamos National Laboratory, "Results of the NRC's Assessment Team Task Group Working Sessions, November 1998," updated November 11, 1998 (Predecisional).
3. Memorandum dated November 4, 1998, from Ashok C. Thadani, Office of Nuclear Regulatory Research, NRC, to Samuel J. Collins, Office of Nuclear Reactor Regulation, NRC, Subject: Draft Recommendations on Development of a Risk-Informed Baseline Inspection Based on Review of Individual Plant Examinations (IPEs) and Probabilistic Risk Assessment (PRA) Insights" (Predecisional).
4. U. S. Nuclear Regulatory Commission, Letter report JCN W6234, Draft #2, prepared by Brookhaven National Laboratory, "Development of a Risk-Informed Baseline Inspection Program," dated October 28, 1998 (Predecisional).
5. U. S. Nuclear Regulatory Commission, report prepared by Princeton Resources Associates, "Plant Specific CDF Information to be Considered for Risk-Informed Inspections, Surry 1," dated October 23, 1998 (Predecisional).
6. Memorandum dated October 13, 1998, from Thomas T. Martin, Office for Analysis and Evaluation of Operational Data, NRC, to Ashok C. Thadani, Office of Nuclear Regulatory Research and Samuel J. Collins, Office of Nuclear Reactor Regulation, NRC, Subject: Risk-Based Performance Indicator Development Program Plan (Predecisional).
7. Nuclear Energy Institute, Draft report dated July 9, 1998, "A New Regulatory Oversight Process - Toward Risk-Informed, Performance-Based Assessment, Inspection and Enforcement" (Predecisional).
8. Report dated September 10, 1997, from R. L. Seale, Chairman, ACRS, to Shirley Ann Jackson, Chairman, NRC, Subject: Staff Action Plan to Improve the Senior Management Meeting Process.
9. Report dated March 13, 1998, from R. L. Seale, Chairman, ACRS, to Shirley Ann Jackson, Chairman, NRC, Subject: Proposed Improvements to the Senior Management Meeting Process.

