UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CHAIRMAN

May 1, 2015

The Honorable Lamar Alexander
Chairman, Subcommittee on Energy and
Water Development
Committee on Appropriations
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

The U.S. Nuclear Regulatory Commission appeared before the Subcommittee on Energy and Water Development on March 4, 2015. From that hearing, you forwarded questions for the hearing record. The responses to those questions are enclosed.

If you need any additional information, please contact me or Mr. Eugene Dacus, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

Stephen G. Burns

cc: Senator Dianne Feinstein

Enclosure:
As stated

Senator Lankford to Chairman Burns

1. **The rules governing the Commission allowed for a former Chairman to keep his fellow commissioners poorly informed and pursue a personal agenda without ever, technically, breaking laws or procedures. What has the NRC done, if anything, to prevent such an abuse in the future?**

Answer

The existing laws governing the Commission provide a framework for effective agency governance by a collegial Commission. Section 201 of the Energy Reorganization Act of 1974 provides that each member of the Commission shall have full access to all information related to the performance of his or her duties and responsibilities. Further, Section 2(c) of the Reorganization Plan No. 1 of 1980 provides that the Chairman is responsible "for insuring that the Commission is fully and currently informed about matters within its functions."

The Commission's internal procedures have been updated in recent years and set forth the procedures governing the conduct of business by the Commission consistent with these legal requirements. The specific procedures may be changed or waived by a majority of the Commission, and questions regarding implementation and interpretation are decided by the Commission as a collegial body, consistent with existing law. The internal procedures are periodically reviewed by the Commission and approved by majority vote.

2. **Sen. Vitter and Rep. Terry have proposed codifying organizational operation procedures for the Commission, which include explicitly making the Chairman responsible for keeping the other Commissioners fully informed "about matters within the functions of the Commission". If a majority of the other Commissioners determine the Chairman has not been acting appropriately, this legislation would provide a way to report that and allow Congress to evaluate whether a change in leadership is needed. Would such a policy safeguard against future abuses? If this type of policy is not needed, how can the American public and the regulated community be assured that one member of the Commission is not legally able to drive the agenda without informed consent of the other Commissioners?**

Answer

As discussed above, the law currently requires the Chairman and the Executive Director for Operations, through the Chairman, to keep the Commissioners fully and currently informed about matters within their functions. Further, each Commissioner is required to have full access to all information relating to the performance of his or her duties. In this context, the Chairman is also "governed by the general policies of the Commission, and by such regulatory decisions, findings, and determinations ... as the Commission may by law, including this Plan, be authorized to make." The internal Commission procedures reflect these provisions. In addition, the Consolidated and Further Continuing Appropriations Act, 2015 (Public Law 113-235) established a requirement that the NRC Chairman inform the Commission and the Congress should he or she begin performing functions under the emergency authority provided for in section 3 of Reorganization Plan No. 1 of 1980.

3. **With regard to the power reactor fees, the NRC takes the amount of fees to be recovered and simply divides by the number of reactors. In light of the reductions to the number of reactors – four have gone offline in the past 2 years, with another one slated to go offline soon – has the Commission revisited how they collect fees?**

Answer

The agency has considered how fees are assessed to reactor licensees. The NRC calculates the 10 CFR Part 171 annual fee based upon the requirement of the Omnibus Budget Reconciliation Act of 1990 (OBRA-90), to fairly and equitably collect fees in order to recover approximately 90 percent of the agency's budget authority. The budgeted resources for power reactors constitute approximately 86% of the NRC's overall recoverable fee budget. The current methodology is used, in part, to provide industry with a predictable annual fee cost while also implementing the agency's responsibility to equitably assess fees. Additionally, the NRC publishes its proposed fee rule annually, taking public comment before issuing its final rule.

4. **Is the Commission concerned that with the competition of other relatively cheap power sources, such as natural gas, this rather arbitrary increase in fees is encouraging nuclear plants to close sooner than they otherwise would?**

Answer

While the Commission is aware of the economic pressures resulting from competition in the energy sector generally, the Commission's role as a regulator is to ensure that the nation's nuclear plants operate safely, consistent with the agency's health and safety mission. The NRC formulates its budget based on estimates of the activities that will be required to license and regulate safe and secure use of nuclear materials during the year of execution. The agency is concerned with carrying out its mission in the most efficient way possible and is continually engaged in identifying how to fulfill that mission with the appropriate level of resources.

Senator Shaheen to Chairman Burns

1. **As you know, the nuclear plant operator, NextEra, has applied to renew its operating license for the Seabrook Station in Seabrook, New Hampshire for an additional 20 years. Their current license expires in 2030, which means if approved, Seabrook will have a license to operate until 2050.**

   Seabrook Station has, however, encountered concrete degradation issues due to alkali–silica reaction (ASR). Throughout the re-application process NextEra has taken actions to understand and monitor the extent of the plant's concrete degradation; however, I have heard concerns from constituents about the testing being conducted to test the long-term impacts of ASR, and I want to make certain it is being conducted in a way that ensures precise results about the plant's structural integrity.

   For example, it is my understanding that NextEra is using a combined crack indexing (CCI) measurement as the primary criterion for assessing the progression of ASR. However, I have also heard that steel reinforcement bars embedded in the building structure may reduce the growth in the width of the cracks in the concrete. Moreover, in the August 9, 2013 inspection report, NRC noted inconsistencies found in tests at Seabrook between NextEra's CCI results and other measures of concrete expansion due to ASR.

   Given these variances in measurement, can you please explain NRC's determination process to allow CCI testing as opposed to any other, generally accepted methods of assessment to quantify the progression of ASR?

   Answer
   In its license renewal application for Seabrook Station, NextEra has proposed combined crack indexing as a method for assessing the progression of alkali-silica reaction. However, the NRC is still reviewing this proposal.

   As part of the ongoing review, the staff issued requests for additional information noting that it is not clear how combined crack indexing accurately correlates cracking due to alkali-silica reaction to structural degradation of affected structures. The requests for additional information ask the licensee to "(1) demonstrate the adequacy of the parameters [cracking] proposed to be monitored or inspected by the program to manage the effects of aging due to alkali-silica reaction; and (2) clearly establish the link between the parameters that will be monitored and how monitoring these parameters will ensure adequate aging management such that the intended function will be maintained during the period of extended operation." The licensee is currently expected to respond to these requests in June 2015. The staff will evaluate the responses against guidance and industry standards to ensure that the proposed monitoring program is adequate to detect alkali-silica reaction and to properly correlate alkali-silica reaction progression with structural degradation.

2. **I also understand that NextEra has commissioned replica studies at the University of Texas in order to determine the long-term effects of ASR on the power plant walls. However, I have heard concerns that the concrete materials used in the study do not precisely mimic the environmental conditions of the Seacoast region or the materials used to build the Seabrook plant. Can you describe the Commission's involvement in the replica studies and what the NRC is doing to ensure the efficacy of the testing?**

Answer

The NRC staff continues to monitor NextEra's testing activities at the University of Texas as part of our oversight of Seabrook Station, including conducting multiple inspections of these activities. The inspections focused on how information gathered from NextEra's test program is considered for applicability to the current conclusions regarding alkali-silica reaction-affected structures at Seabrook Station. While NextEra chose to conduct a large-scale testing program at the University of Texas as a possible basis for developing future actions to address the alkali-silica reaction issue, the NRC has neither directed nor approved this test program. If the licensee determines that future test results provide a technical basis to resolve this non-conforming condition, the NRC would expect NextEra to provide the results to the agency for our review and approval. Any submittal by NextEra would need to demonstrate that the test program and results accurately reflect conditions at the Seabrook Station.