

August 24, 2012

The Honorable Robert Menendez  
United States Senate  
Washington, D.C. 20510

Dear Senator Menendez:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of June 6, 2012, regarding NRC activities. First, thank you for your feedback regarding the agency's public meetings. I am pleased that we were able to provide an opportunity for the community to have an open, public session with our staff. You also wrote to express concerns about ensuring the continued safety of the operating nuclear power plants and the need for the NRC to act more promptly in responding to identified areas of concern. We will address your questions regarding filtered vents in a separate letter.

The NRC provides ongoing oversight of the safety of all commercial nuclear power plants, regardless of whether they hold or have applied for a renewed license. One of the programs the NRC employs to provide that oversight is the Reactor Oversight Process. The Reactor Oversight Process uses a variety of tools and inspection techniques to monitor and evaluate the licensee performance. The process focuses on those plant activities that are most important to safety. Specifically, the Reactor Oversight Process consists of three key strategic performance areas: reactor safety, radiation safety, and safeguards. Within these strategic performance areas are the essential safety cornerstones of facility operation: initiating events, mitigating systems, barrier integrity, emergency preparedness, public radiation safety, occupational radiation safety, and security. Satisfactory licensee performance in the cornerstones provides reasonable assurance that the facility is operating safely and that the NRC's safety mission is being accomplished.

The NRC continuously assesses plant performance in each cornerstone by analyzing two inputs: NRC inspection findings and performance indicators reported by the licensee. Both inspection findings and performance indicators are evaluated and given a color designation based on their safety significance. Green inspection findings indicate a deficiency in licensee performance that has very low risk significance with little or no impact on safety. Green performance indicators represent acceptable performance in which cornerstone objectives are fully met and likewise have little or no impact on safety. White, Yellow, or Red inspection findings or performance indicators each, respectively, represent a greater degree of safety significance and therefore result in increased regulatory attention in accordance with the Reactor Oversight Process Action Matrix. All inspection findings and performance indicators for the previous four quarters at the Oyster Creek Nuclear Generating Station have been Green.

The Reactor Oversight Process is a mature, effective oversight process. However, the staff continues to refine it in response to emerging issues, lessons learned, and suggested improvements from internal and external stakeholders. The NRC staff performs an annual self-assessment of the Reactor Oversight Process to evaluate its effectiveness against pre-established measures related to the program goals of being objective, risk informed, understandable, and predictable. The staff also evaluates industry trends to monitor the safety performance of operating reactors as an additional indicator of Reactor Oversight Process effectiveness.

Regarding the safety of aging nuclear power plants, the NRC's primary focus during the license renewal process is aging management. Each license renewal application must contain technical information and evaluations about the types of aging effects that may be encountered in a specific plant and how the licensee will manage those effects. The NRC staff performs a safety review of the information in the application and draws conclusions about whether the applicant will adequately manage the effects of aging such that the plant can be operated safely during the period of extended operation. To support its evaluation, the NRC uses its Generic Aging Lessons Learned Report, first issued more than 10 years ago. The Generic Aging Lessons Learned Report is a systematic compilation of plant aging information and describes over 50 programs acceptable to the NRC staff for managing the effects of aging. The NRC staff performs inspections and audits during the license renewal process and performs follow-up inspections to verify implementation of aging management programs.

Finally, you commented that the NRC should respond more promptly to identified areas of concern. The NRC strives to implement regulatory changes based on lessons learned in as rapid a manner as practical. As an example, immediately after the 2011 earthquake and tsunami that devastated the nuclear power plants at Fukushima Dai-ichi in Japan, the Commission established a Near-Term Task Force to identify lessons learned from that disaster that could be used to further enhance the safety of U.S. power reactors. Those lessons received prompt attention by the NRC and have been prioritized for implementation in a systematic and methodical manner. Specifically, the NRC staff has been focused on assessing the identified lessons learned and making the necessary enhancements to its regulatory system to increase the capability of nuclear power plants to mitigate beyond-design-basis external events.

On March 12, 2012, following Commission approval, the agency issued three orders that contained several new requirements. One of the orders requires boiling water reactors with Mark I and Mark II containments to have reliable hardened vents to remove decay heat and maintain control of containment pressure following events that result in the loss of active containment heat removal capability or prolonged station blackout. The second requires development of a three-phase approach to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities following a beyond-design-basis external event. The third requires installation of enhanced spent fuel pool instrumentation. Each of the orders was focused on enhancing the redundancy and diversity of plant equipment necessary to respond to a beyond-design-basis event.

The agency also issued letters on March 12, 2012, directing each nuclear power plant licensee to reevaluate the seismic and flooding hazards at its sites using present-day methods and information, conduct walkdowns of their facilities to ensure protection against the hazards in their current design basis, and reevaluate their emergency communications systems and staffing levels. The majority of reactor licensees, especially those with the greatest potential seismic and flooding risks, are expected to complete the seismic and flooding reevaluations within the five-year goal established by the Commission. Once responses to the letters are received, the staff will assess them and make recommendations to the Commission on any additional safety requirements that may be warranted. In addition, most reactor licensees will complete the walkdowns and emergency communications and staffing assessments by the end of this year.

In addition, on March 20, 2012, the NRC issued an advanced notice of proposed rulemaking to solicit public input on a rulemaking for station blackout. This step moves the NRC closer to issuing a final rule within the 24 to 30-month schedule directed by the Commission. On April 18, 2012, the staff issued another advanced notice of proposed rulemaking to solicit public input on the integration of emergency procedures at nuclear power plants.

The staff is continuing to address the remaining recommendations of the Near-Term Task Force based on relative priorities.

Please be assured that the NRC has in place a rigorous reactor oversight program and a license renewal process that thoroughly assesses plant aging issues. The agency continues to promptly address new safety concerns as they arise. If you have any questions, please contact me or Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

/RA/

Allison M. Macfarlane