

May 8, 2012

The Honorable Richard S. Lugar
United States Senate
Washington, DC 20510

Dear Senator Lugar:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of March 30, 2012, forwarding correspondence from your constituent, Mr. Gordon Wilder. Mr. Wilder was concerned about the safety of U. S. commercial nuclear power plants following the events at the Fukushima Dai-ichi facility in Japan. He mentions, in particular, the recent approval of two applications to build new nuclear power plants at the site of the existing Vogtle Electric Generating Plant near Augusta, Georgia.

From everything that we have assessed to date, we continue to believe that there is no imminent risk from continued operation of nuclear power plants in the United States and from continued licensing of both existing and new nuclear power plants. Nonetheless, the NRC's assessment of insights from the events at Fukushima Dai-ichi leads us to conclude that additional requirements should be imposed on licensees to increase the capability of nuclear power plants to mitigate the effects of certain beyond-design-basis, extreme, natural events such as earthquakes and floods.

The AP1000 nuclear reactor design is a pressurized water reactor that contains many features not found in current operating reactors. The most significant improvement to the design is the use of safety systems that employ passive means, such as gravity, natural circulation, condensation and evaporation, and stored energy, for accident mitigation. These passive safety systems perform safety injection, residual heat removal, and containment cooling functions.

For new reactor facilities, the NRC reviews applications submitted by prospective licensees, and (when appropriate) issues standard design certifications, early site permits, limited work authorizations, construction permits, operating licenses, and combined licenses. The two new units under construction at the Vogtle site are based on Westinghouse Electric Company's AP1000 standard nuclear reactor design that the NRC has certified through rulemaking. By issuing a design certification, the NRC approves a nuclear power plant design, independent of an application to construct or operate a plant.

In 2007, Westinghouse submitted an application to amend the existing AP1000 Design Certification Rule to incorporate a number of updates and improvements to the design. On December 30, 2011, the NRC published a final rule to certify this amendment to the AP1000 standard plant design. This action enables applicants or licensees intending to construct and operate an AP1000 design to reference this regulation and not separately demonstrate in their applications the safety of the certified design.

In 2008, Southern Nuclear Operating Company submitted combined license applications (COL) for two new AP1000 reactor units at the Vogtle site. The COL application is the process by which a licensee may be permitted to construct and (with specified conditions) operate a nuclear power plant at a specific site, in accordance with established laws and regulations. From early 2008 through August 2011, the NRC staff spent approximately 31,000 hours on its safety and environmental reviews of these applications employing well over 100 scientists, engineers, and technical specialists in the process. Technical support contractors, under staff supervision, provided approximately 8,000 additional hours to the review effort. The staff conducted more than 60 public meetings and conference calls in support of its review, and required Southern to respond to over 500 questions, including 460 safety-related questions and 70 questions on environmental issues. In addition, the staff received and considered over 300 comments on its draft supplemental environmental impact statement.

In its Mandatory Hearing Decision for the Combined License Applications for Vogtle, Units 3 and 4, the Commission found that the staff's review of the safety and environmental issues related to Southern's applications was sufficient to support the required regulatory findings for each of the combined licenses to be issued. With regard to the impact of the NRC's ongoing efforts to address lessons learned from the Fukushima Dai-ichi accident and their applicability to existing or new reactors, the Commission noted that the agency has in place well-established regulatory processes by which to impose any new requirements or other enhancements that may be needed. The Commission further stated that all affected nuclear plants will be required to comply with NRC direction resulting from lessons learned from the Fukushima accident, regardless of the timing of issuance of the affected licenses, and that it expected that the new Vogtle units will comply with all applicable "post-Fukushima" requirements.

I hope this adequately responds to your constituent's concerns. Should you need additional information, please contact me or Ms. Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

/RA by Michael F. Weber for/

R. W. Borchardt
Executive Director
for Operations

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