

July 30, 2012

The Honorable Joseph I. Lieberman
Chairman, Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am writing to describe NRC's response to the U.S. Government Accountability Office (GAO) recommendation in GAO-12-465, "Nuclear Regulatory Commission - Natural Hazard Assessments Could be More Risk-Informed," dated April 26, 2012. The Commission agrees with the GAO report, and the NRC staff has begun implementing the recommendation.

GAO recommended that the NRC "analyze whether licensees of operating reactors should be required to develop PRAs (probabilistic risk assessments) that address natural hazards." The NRC agrees and in fact, has several ongoing initiatives that directly relate to this issue. The NRC's Office of Nuclear Regulatory Research is currently conducting a Level 3 PRA for Vogtle Electric Generating Plant, Units 1 and 2. A Level 3 PRA estimates the public risks from severe accidents that could release radioactive materials to the environment. A Level 3 PRA provides consequence estimates of such releases in terms of public radiological health effects (e.g., long-term cancers) and economic costs (e.g., evacuation, land contamination). This Level 3 PRA project is discussed in SECY-11-0089, "Options for Proceeding with Future Level 3 Probabilistic Risk Assessment Activities," dated July 7, 2011, and the corresponding staff requirements memorandum, dated September 21, 2011. The scope of this Level 3 PRA effort encompasses natural hazards typically considered in previous external event PRAs (e.g., seismic events, tornadoes, hurricanes, and external flooding), and will address in more detail the impact of these natural hazards on one or both operating reactors at the site, as well as on the spent fuel pools. This study should offer insights on the potential benefits of applying Level 3 PRA to other power reactors and provide useful information on the level of resources necessary to develop and maintain this risk assessment tool.

The NRC continues to evaluate potential additional use of PRAs within its regulatory programs. Last year, NRC Commissioner George Apostolakis led a risk management task force to develop a strategic vision and options for adopting a more comprehensive, holistic, risk-informed, performance-based regulatory approach for nuclear reactors, as well as for nuclear materials, waste, fuel cycle, and transportation. The staff is currently evaluating the resulting task force report (NUREG-2150, "A Proposed Risk Management Regulatory Framework," and will provide recommendations to the Commission, likely in 2014, on whether the NRC should make modifications to the regulatory framework.

The NRC received direction from Congress (the Consolidated Appropriations Act; Section 402 of Public Law 112-074, December 2011) similar in scope to a Fukushima Near-Term Task Force's Recommendation concerning the need to reevaluate the seismic and flooding hazards against current NRC requirements and guidance, and if necessary, update the design basis and structures, systems and components important to safety. On March 12, 2012, the NRC issued a request for information to all power reactor licensees and holders of construction permits. Licensees are reevaluating the seismic and flooding hazards at all nuclear power plant sites per present-day regulatory guidance and methodologies used for new reactor licensing. In some cases, a risk assessment or integrated assessment will be used to evaluate plant response to the re-evaluated hazards. The NRC staff will evaluate the licensees' responses to this request for information and will determine whether additional regulatory actions are necessary to provide additional protection against natural hazards.

The NRC will conduct and document the analysis recommended by GAO in the context of the agency's follow-on actions for one or more of these ongoing initiatives. As the NRC gathers additional information from these activities, the NRC will continue to evaluate its processes, policies, and regulations regarding the enhanced use of PRA and risk insights as part of its overall regulatory framework.

The NRC appreciates the opportunity to share its planned actions to implement the recommendation discussed in the GAO report. Should you have any questions, please contact Ms. Rebecca L. Schmidt, Director of the Office of Congressional Affairs, at email: Rebecca.Schmidt@nrc.gov.

Sincerely,

/RA/

Allison M. Macfarlane

cc: Senator Susan Collins

Identical letter sent to:

The Honorable Joseph I. Lieberman
Chairman, Committee on Homeland Security
and Governmental Affairs
United States Senate
Washington, DC 20510
cc: Senator Susan Collins

The Honorable Barbara Boxer
Chairman, Committee on Environment
and Public Works
United States Senate
Washington, DC 20510
cc: Senator James M. Inhofe

The Honorable Thomas R. Carper
Chairman, Subcommittee on Clean Air
and Nuclear Safety
Committee on Environment and Public Works
United States Senate
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cc: Senator John Barrasso

The Honorable Fred Upton
Chairman, Committee on Energy
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United States House of Representatives
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The Honorable Ed Whitfield
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The Honorable John Shimkus
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The Honorable Daniel K. Inouye
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