

June 5, 2013

The Honorable Thomas Carper
Chairman, Committee on Homeland
Security and Governmental Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am writing in response to the U.S. Government Accountability Office (GAO) Report, GAO-13-243, "Emergency Preparedness: NRC Needs to Better Understand Likely Public Response to Radiological Incidents at Nuclear Power Plants," dated March 11, 2013.

The NRC agrees with the GAO's overall assessment of emergency preparedness around nuclear power plants. However, the NRC would like to comment on the recommendation from the report.

Recommendation: "To better inform efforts for nuclear power plant emergency preparedness and planning, we [the GAO] recommend that NRC Commissioners obtain information on public awareness of radiological emergency preparedness for communities outside the 10-mile emergency planning zone, and the likely response of those communities in the event of a radiological incident at a nuclear facility and consider how these results may affect estimates for shadow evacuations outside the zone."

The NRC generally disagrees with the GAO's finding on shadow evacuations. The NRC does not consider the report to accurately capture the technical basis for the NRC's estimations for shadow evacuation outside of the 10-mile emergency planning zone. The NRC has studied evacuations of populations (greater than 1,000 people) from a variety of hazardous conditions in the U.S. Shadow evacuations and the potential impacts on the evacuated population were among many factors studied. While the studies indicated that shadow evacuations occur, they also showed the impact on the overall evacuation to be relatively minor. A number of NRC licensees have completed sensitivity analyses on the impact of shadow evacuations in NRC-required evacuation time estimates. Again, these analyses show that shadow evacuations will have an effect, but that the effect is minimal. There are several reasons for this conclusion. First, the network of roads rapidly expands further away from each site, providing greater capacity to absorb additional cars. Additionally, the population that would be part of a shadow evacuation resides beyond the 10-mile emergency planning zone border and would enter into the roadways at a distance well removed from the site; this population would be miles ahead of the evacuating population. Further, real-world evidence shows that shadow evacuations occur in a graduated manner with an increased population evacuating closer to the source and tapering to zero at greater distances from the incident. To ensure that the impacts of shadow evacuations are appropriately considered, the NRC included guidance on how licensees should evaluate shadow evacuations in NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies."

As part of the follow-up to the accident at Fukushima, the NRC plans to use insights from ongoing technical studies to inform, as necessary, the NRC's regulatory approach to emergency planning around nuclear power plants. The current emergency planning bases for all NRC-licensed nuclear power plants continue to provide reasonable assurance of protection of the public's health and safety.

The NRC appreciates the opportunity to comment and provide agency actions taken regarding the recommendations in the GAO Report. Should you have any questions, please contact Ms. Rebecca Schmidt, Director of the Office of Congressional Affairs, at (301) 415-1776.

Sincerely,

/RA/

Allison M. Macfarlane

cc: Senator Tom Coburn

Identical letter sent to:

The Honorable Thomas Carper
Chairman, Committee on Homeland
Security and Governmental Affairs
United States Senate
Washington, D.C. 20510
cc: Senator Tom Coburn

The Honorable Darrell Issa
Chairman, Committee on Oversight
and Government Reform
United States House of Representatives
Washington, D.C. 20515
cc: Representative Elijah Cummings

Mr. Frank Rusco, Director
Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
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cc: K. Gianopoulos, GAO