

June 18, 2012

The Honorable Nita M. Lowey  
United States House of Representatives  
Washington, D.C. 20515

Dear Congresswoman Lowey:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter of March 13, 2012, regarding the adequacy of evacuation plans for communities surrounding U.S. nuclear power plants in light of the events at Japan's Fukushima Dai-ichi facility last year.

The Commission has defined two emergency planning zones (EPZs) around each nuclear plant. The exact size and configuration of these zones may vary from plant to plant due to local emergency response needs and capabilities, demography, topography, land characteristics, access routes, and jurisdictional boundaries. The two EPZs are the plume exposure pathway EPZ and the ingestion exposure pathway EPZ.

A plume exposure pathway EPZ is an area of approximately 10 miles in radius around each nuclear power plant. Site-specific, predetermined emergency plans are in place for this EPZ and include provisions for protective actions designed to avoid or reduce dose from exposure to radioactive materials in the event of a radiological emergency. These actions include evacuation, sheltering, and the use of potassium iodide, where appropriate.

An ingestion exposure pathway EPZ is an area of approximately 50 miles in radius around each nuclear power plant. Site specific emergency plans are in place for this EPZ as well, and include provisions to avoid or reduce dose from the possible ingestion of radioactive materials that could contaminate water and food sources as the result of a radiological emergency.

Over the years, the NRC staff has conducted several studies that provided additional insights regarding the adequacy of the plume exposure pathway EPZ. The results of these studies have been published as NRC documents. They include: (1) NUREG/CR 6953, "Review of NUREG-0654, Supplement 3, 'Criteria for Protective Action Recommendations for Severe Accidents,'" which evaluated the efficacy of various protective action strategies within the EPZ; (2) NUREG/CR-6864, "Identification and Analysis of Factors Affecting Emergency Evacuations," which examined large evacuations in the U.S. between 1990 and 2003 to more fully understand the dynamics involved; and (3) Draft NUREG-1935, "State of the Art Reactor Consequence Analysis," which evaluated hypothetical evacuations within EPZs and beyond in response to a series of accident scenarios.

In March 2011, following the events at Fukushima Dai-ichi, the NRC established a senior-level agency near-term task force (NTTF) to conduct a methodical and systematic review of NRC processes and regulations to determine whether any improvements to our regulatory system were warranted. The NTTF submitted its report and recommendations to the Commission in July 2011. In October 2011, the NRC staff provided its proposed plan of action and three-tiered prioritization of the NTTF recommendations, which included the identification of recommendations related to lessons learned from the Fukushima Dai-ichi event beyond those identified in the NTTF report. Among the additional issues identified by the staff was the technical basis of the EPZ size. The NRC staff recommended that this issue be further reviewed in light of the Fukushima accident to determine whether any enhancements to existing strategies are warranted.

The agency is currently addressing all "Tier 1" recommendations, which are those that the NRC staff determined should be started without unnecessary delay. We anticipate being able to begin work on the next set, or "Tier 2" recommendations after we collect information from the actions underway and the necessary staff expertise becomes available. In July 2012, the NRC staff will provide the Commission with a plan for addressing the remaining longer-term activities, designated as "Tier 3," which includes the issue of the basis of the EPZ size.

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

Sincerely,

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Gregory B. Jaczko