

January 23, 2013

The Honorable Judy Ritter
Mayor of City of Vista
200 Civic Center Drive
Vista, CA 92084-6275

Dear Mayor Ritter:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your November 12, 2012, letter in which you raised policy issues for the Commission's consideration. Specifically, you asked the Commission to support the efforts of Senators Dianne Feinstein and Barbara Boxer to encourage the NRC to modify its license renewal policies. You also asked the Commission to support Senators Feinstein and Boxer's call to implement the short-term recommendations of the NRC Near-Term Task Force report and develop a more immediate plan for implementing the longer term recommendations.

The agency continuously seeks new information and often reviews and revises its regulations. The Commission had previously examined a number of issues that could be addressed in the NRC's license renewal process and determined that, with the exception of additional measures required to address age-related degradation of certain passive, long-lived systems, structures, and components, the NRC's existing regulatory process ensures that the licensing bases of all currently operating plants maintain adequate protection of public health, safety and security. The Commission considered whether or not to include emergency planning, security, design elements, operational issues, and other topics, but ultimately determined that the existing regulatory process was sufficient to ensure adequate protection of public health and safety during periods of extended operation without additional reviews. The NRC considers those topics on an ongoing basis as part of its inspection program, operating experience review program, and generic issues program. Because of this ongoing oversight, the NRC is able to address significant issues as they occur instead of waiting for a license renewal application to address them. For example, the NRC recently made changes to its emergency preparedness regulations for all operating reactors. These safety improvements apply to reactors in their initial term of operation, as well as during any renewal term.

Regarding Fukushima-related safety improvements, the NRC staff is working to implement the recommendations provided in the 90-day task force report and has made progress to date. The NRC prioritized its actions into three tiers. The first tier consists of those actions which the staff determined should be started without unnecessary delay and for which sufficient resource flexibility, including availability of critical skill sets, exists. The second tier consists of those actions that could not be initiated in the near term due to factors that include the need for further technical assessment and alignment dependence on Tier 1 issues, or availability of critical skill sets. The third tier consists of those actions that require further staff study to support a regulatory action.

The NRC has made the most significant progress with Tier 1 recommendations. For example, the NRC has requested that each licensee physically review its plants and assure they are in compliance with their current design bases for seismic and flooding events. The licensees have completed these reviews and the NRC is providing further oversight. Further, the licensees are reevaluating the level of protection of their plants using our recent understanding of seismicity and flooding in the U.S. Should these assessments identify weaknesses in current designs, the NRC will order additional changes to ensure that plant operations do not pose an undue risk to the public health and safety. In addition, the NRC now requires licensees to make changes to emergency response capability and install additional spent fuel pool instrumentation to provide information to plant operators following a major external event, such as a strong earthquake.

The NRC is also pursuing additional Tier 2 and Tier 3 recommendations from the Near-Term Task Force report and subsequent assessments of lessons learned from the Fukushima Dai-ichi accident. For example, the NRC staff is evaluating whether changes to the emergency planning zone around a nuclear power plant are warranted. This topic was not within the initial recommendations of the Near-Term Task Force. The Tier 2 and Tier 3 recommendations have longer-term implementation schedules. This timing allows the agency to obtain additional information needed to support policy decisions, allocate resources, and coordinate with other ongoing and planned activities. The question of emergency planning zone size is one of several issues related to emergency preparedness for which we are acquiring additional information from the experience in Japan, as well as coordinating with Federal, state, and local emergency planning experts.

Regarding your specific point about expanding the evacuation zone from a 10-mile radius to a 50-mile radius, the NRC's regulations in Title 10 of the *Code of Federal Regulations* 50.47(c)(2), "Emergency Plans," states that the exact size and configuration of the emergency planning zones surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The Commission defines two emergency planning zones 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 emergency planning zones are the plume exposure pathway emergency planning zone and the ingestion exposure pathway emergency planning zone.

A plume exposure pathway emergency planning zone is an area of approximately 10 miles in radius around each nuclear power plant. Site-specific, predetermined emergency plans are in place for this emergency planning zone 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 emergency planning zone is an area of approximately 50 miles in radius around each nuclear power plant. Site specific emergency plans are in place for this emergency planning zone 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 emergency planning zone. 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 emergency planning zone; (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 Analyses," which evaluated hypothetical evacuations within emergency planning zones and beyond in response to a series of accident scenarios. These studies support the NRC's basis for concluding that the existing emergency preparedness framework and regulations provide reasonable assurance of adequate protection of public health and safety in the event of a radiological emergency at a U.S. nuclear power plant. Nevertheless, the NRC staff is planning to review the basis for the emergency planning zones as a longer-term activity to determine whether any enhancements to existing strategies are warranted. In addition, through regular reactor site drills, NRC will continue to evaluate both existing requirements and new requirements that were added as a result of lessons learned from the Fukushima Dai-ichi accident.

The NRC staff provides periodic updates to the Commission on the status of its activities, including assessing emergency planning zone sizes, to address lessons learned from the Fukushima Dai-ichi accident. The last update was provided in a Commission paper, SECY-12-0095, "Tier 3 Program Plans And 6-Month Status Update In Response To Lessons Learned From Japan's March 11, 2011, Great Tohoku Earthquake And Subsequent Tsunami," dated July 13, 2012 (Agencywide Document Access and Management System Accession No. ML12165A093), Enclosure 2.

On behalf of the NRC, thank you for your continued involvement in matters related to nuclear safety. You and your constituents' interest and feedback help the NRC to fulfill its public health and safety mission in an open and transparent manner.

Sincerely,

/RA/

Allison M. Macfarlane

cc: Senator Dianne Feinstein
Senator Barbara Boxer
Congressman Darrell Issa