

August 28, 2012

The Honorable Joe Kellejian
Mayor of the City of Solana Beach
635 South Highway 101
Solana Beach, CA 92075-2215

Dear Mayor Kellejian:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated May 1, 2012, in which the City Council of Solana Beach conveyed concerns about the safety of the San Onofre Nuclear Generating Station (SONGS). Specifically, your letter expressed the Council's view that a more comprehensive study of SONGS and its operations be conducted before restarting the plant following the correction of the recent steam generator tube issues. You further expressed support for Senator Barbara Boxer's and Senator Dianne Feinstein's previous recommendations that (1) the NRC modify its license renewal policies and (2) the NRC implement the recommendations of its Fukushima task force as soon as possible, particularly the recommendation to expand the size of the emergency planning zone.

As you noted in your letter, SONGS Units 2 and 3, are currently shut down due to excessive steam generator tube wear. On March 27, 2012, the NRC issued a Confirmatory Action Letter to Southern California Edison Company (SCE, the licensee for SONGS) identifying those specific actions the licensee has committed to take prior to returning the units to power operation. Under the terms of the Confirmatory Action Letter, each unit will remain shut down until the licensee provides its written evaluations and responses to the Confirmatory Action Letter items for that unit, and the NRC reviews that information and concludes that the unit can be operated without undue risk to public health and safety or the environment. The NRC will not grant permission for restart until the agency is confident that the licensee can operate the plant safely. The NRC will transmit its determinations in writing to SCE regarding the restart of SONGS Units 2 and 3.

The terms of the Confirmatory Action Letter do not require, as a condition for plant restart, a comprehensive study of SONGS and its operations in relation to the events at Fukushima Dai-ichi. However, since the Fukushima Dai-ichi event, the NRC staff has taken a number of actions to assess plant safety, identify lessons learned, and evaluate appropriate enhancements to the NRC's regulatory program. The NRC conducted inspections in the spring of 2011 at all nuclear power plants, including SONGS, to assess the adequacy of licensee actions in response to the Fukushima Dai-ichi event. In March 2011, the Commission established a senior-level agency Near-Term Task Force to conduct a methodical and systematic review of NRC processes and regulations to determine if there are additional improvements that could be made to the regulatory system. This task force concluded that continued operation and licensing activities do not pose an imminent risk to public health and safety. The task force also provided twelve recommendations to clarify and strengthen the regulatory framework. In October 2011, the NRC staff provided its proposed plan of action and prioritization of the task force recommendations, as well as actions beyond those recommended

in the task force report. That plan is publicly available in the NRC's Agencywide Documents Access and Management System at Accession No. ML11272A111, and on the NRC website at: <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2011/2011-0137scy.pdf>. On December 15, 2011, the Commission approved the staff's plan and provided additional direction to the staff.

On March 12, 2012, the NRC issued three orders requiring nuclear power plants to implement safety enhancements related to (1) mitigating strategies to respond to extreme natural events resulting in the loss of electric power at plants, (2) ensuring reliable hardened containment vents (does not apply to SONGS because it's not boiling-water reactor), and (3) enhancing spent fuel pool instrumentation. The NRC has required all operating nuclear power plants to begin implementation of the safety enhancements and to complete implementation within two refueling outages, or by December 31, 2016, whichever comes first. In addition, the NRC issued a formal request for information to all operating reactor licensees to (1) reevaluate seismic and flooding hazards (including tsunami hazards) at their sites using applicable current methods and information, (2) conduct walkdowns of their facilities to ensure protection against the seismic and flooding hazards in their current design basis, and (3) reevaluate their emergency communications systems and staffing levels. The NRC will evaluate the responses to the request for information in determining the need for plant modifications or further enhancements to address seismic and flooding hazards as well as emergency communications. You may find these orders and requests for information, as well as other information on the agency's response to the Fukushima event, at <http://www.nrc.gov/reactors/operating/ops-experience/japan-info.html>. The Commission has directed that the NRC staff should strive to complete and implement the lessons learned from the Fukushima accident with five years – by 2016.

Among the additional issues identified by the NRC staff as having a nexus to the Fukushima event was the basis of the emergency planning zone size. 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. On July 13, 2012, the NRC staff provided the Commission with 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," which is a plan for addressing the longer-term activities being taken in response to the Fukushima event, including the issue of the basis of the emergency planning zone size.

Regarding your request that the NRC modify its license renewal policies to include a reexamination of the plant's design elements, the NRC continually reviews and enhances its regulations, including those related to license renewal. Prior to publishing the current license renewal regulations, the NRC examined a number of issues that could be addressed in the license renewal process. The Commission determined that, with the exception of age-related degradation of certain passive, long-lived systems, structures, and components, the NRC's regulatory process is adequate to ensure that the licensing bases of all currently operating plants maintains public safety and security. The Commission considered whether or not to include emergency planning, security, and other topics in the license renewal process, but determined that the existing regulatory process was sufficient. Those topics currently are considered on an ongoing basis in connection with the NRC's oversight of operating reactors, so that any matter of significance would be evaluated promptly, rather than waiting for a licensee to apply for license renewal.

Thank you for conveying the Solana Beach City Council's concerns about these matters.

Sincerely,

/RA/

Allison M. Macfarlane