

August 30, 2012

The Honorable Sukhee Kang
Mayor of the City of Irvine
One Civic Center Plaza
P.O. Box 19575
Irvine, California 92623

Dear Mayor Kang:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated April 30, 2012, in which you conveyed concerns from the Irvine City Council and the citizens of Irvine regarding the safety of the San Onofre Nuclear Generating Station (SONGS).

In your letter, you expressed support for Senator Dianne Feinstein's April 20, 2011, letter to then Chairman Jackzo. The Chairman's response to Senator Feinstein, dated August 10, 2011, is publicly available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML11143A053. In that letter, the Chairman explained that the Commission previously examined a number of issues that could be addressed in the NRC's license renewal process and determined that, with the exception of age-related degradation of certain passive, long-lived systems, structures, and components, the NRC's existing regulatory process is adequate to ensure that the licensing bases of all currently operating plants maintain public safety and security. The Commission considered whether or not to include emergency planning, security, and other topics, but determined that the existing regulatory process was sufficient. The NRC considers those topics on an ongoing basis as part of its oversight of operating reactors. As such, the NRC is able to promptly evaluate any matter of significance and does not need to wait for a license renewal application to evaluate issues. For example, the NRC made recent changes to its emergency preparedness regulations, which apply to all facilities, both in their initial term of operation, as well as during the term of renewal.

To date, Southern California Edison (SCE) Company has not submitted an application to the NRC for renewal of the operating licenses for SONGS, Units 2 and 3. However, the company has filed information with the California Public Utilities Commission indicating its intention to apply for license renewal. If SCE submits a license renewal application for SONGS to the NRC, the agency will perform its review consistent with NRC requirements and procedures.

The NRC staff has been focused on assessing the identified lessons learned from the Fukushima Dai-ichi event in Japan, and on making any necessary enhancements to the NRC regulatory program. 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 additional improvements that could be made to the agency's regulatory system. 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, into three tiers, and on December 15, 2011, the Commission approved the staff's

plan and provided additional direction. That plan is publicly available in ADAMS, at Accession No. ML11272A111.

The agency has been proceeding to address all Tier 1 recommendations. Tier 1 recommendations are actions that the Commission directed to be started without unnecessary delay. On March 12, 2012, the NRC issued three orders to 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 (applicable only to boiling-water reactors with Mark I or Mark II containments), and (3) enhancing spent fuel pool instrumentation. All operating nuclear power plants are required 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, asking 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 SCE's response to the request for information in determining the need for plant modifications or further enhancements to address seismic and flooding hazards at SONGS. These orders and requests for information, as well as other information on the agency's response to the Fukushima event, are accessible on the NRC website at: <http://www.nrc.gov/reactors/operating/ops-experience/japan-info.html>.

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 has defined 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 will 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, including the issue of the basis of the emergency planning zone size.

The NRC shares your concerns about human performance. We do take these concerns seriously, as evidenced by our actions to address human performance, management, and safety culture issues at SONGS that you noted in your letter. As part of our Reactor Oversight Process, the NRC will continue to inspect, observe, and assess licensee performance, to ensure that licensee corrective actions in these areas are effective and are sustained.

Your letter specifically requested that a permanent offsite storage solution for spent nuclear fuel be identified as a condition for relicensing. United States policies governing the permanent disposal of spent nuclear fuel (also identified as high-level waste) are defined by the Nuclear Waste Policy Act of 1982, as amended. Based on the budget limitations, NRC's review of the U.S. Department of Energy's application for a high-level waste repository is currently suspended.

SONGS currently stores spent nuclear fuel onsite, in an independent spent fuel storage installation (also known as "dry cask storage"), and in the spent fuel pools in Units 2 and 3. The NRC has reviewed and approved the designs of the spent fuel storage structures and facilities with consideration for the unique characteristics of the SONGS site, including the design basis seismic ground motion. The NRC and the licensee will reevaluate the spent fuel storage structures, as needed, based on the results of ongoing seismic reviews and other lessons learned in response to the Fukushima events.

As noted in your letter, SONGS Units 2 and 3, are currently shut down because of excessive steam generator tube wear. On March 27, 2012, the NRC issued a Confirmatory Action Letter (ADAMS Accession No. ML12087A323), to SCE identifying those specific actions the licensee has committed to take before 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 to the environment.

The NRC will not grant permission for restart of these units until the agency is confident that the licensee can operate the plant safely. The NRC will transmit to SCE in writing its determinations regarding the restart of SONGS, Units 2 and 3.

- 4 -

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

Sincerely,

/RA/

Allison M. Macfarlane