

June 13, 2001

Mr. Harold B. Ray  
Executive Vice President  
Southern California Edison Company  
San Onofre Nuclear Generating Station  
P.O. Box 128  
San Clemente, CA 92674-0128

SUBJECT: SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3 -  
ISSUANCE OF AMENDMENTS RE: INCREASE IN REACTOR POWER TO  
3438 MWt (TAC NOS. MB1623 AND MB1624)

Dear Mr. Ray:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for amendment dated April 3, 2001, and supplemented April 23, May 11, May 25, and May 31, 2001. The proposed amendment would change the facility license and the technical specifications to increase the maximum reactor core power level for each unit from 3390 megawatts thermal (MWt) to 3438 MWt, an increase of 1.42 percent of rated core thermal power for San Onofre Nuclear Generating Station (SONGS), Units 2 and 3.

This assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

**/RA/**

Joseph E. Donoghue, Senior Project Manager  
Project Directorate IV, Section 2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-361 and 50-362

Enclosure: Environmental Assessment

cc w/encl: See next page

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**ACCESSION NO: ML01**

NRR-042

\*See previous concurrences

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DATE	6/7/2001	6/12/01	4/23/01	5/3/01	6/13/01

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UNITED STATES NUCLEAR REGULATORY COMMISSION

SOUTHERN CALIFORNIA EDISON

DOCKET NOS. 50-361 AND 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NOS. 2 AND 3

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an amendment to Facility Operating Licenses Nos. NPF-10 and NPF-15, issued to Southern California Edison Company (SCE or the licensee), for operation of the San Onofre Nuclear Generating Station (SONGS), Units Nos. 2 and 3, located in San Diego County, California.

ENVIRONMENTAL ASSESSMENT

Identification of Proposed Action:

The proposed action would amend the facility license and the technical specifications for SONGS Units 2 and 3, to allow SCE to increase the maximum reactor core power level for each unit from 3390 megawatts thermal (MWt) to 3448 MWt, which is an increase of 1.42 percent of rated core thermal power for SONGS Units 2 and 3.

The proposed action is in accordance with the licensee's application for amendment dated April 3, 2001, and supplemented April 23, May 11, May 25, and May 31, 2001.

The Need for the Proposed Action:

The proposed action would permit an increase in the licensed core thermal power from 3390 MWt to 3448 MWt and is needed to allow an increase in the net electrical output of SONGS Units 2 and 3 and, thus, provide additional electrical power to service domestic and commercial areas of the licensee's grid.

Environmental Impacts of the Proposed Action:

In support of its request for the proposed power uprate, SCE evaluated the radiological effects of the proposed action, and specifically evaluated its radioactive waste management systems including system/component activity inventories and activity releases associated with the liquid, gaseous, and solid waste management systems, as well as the process and effluent radiological monitoring and sampling systems. In addition, SCE evaluated the non-radiological effects of the proposed action. Based on its review of the licensee's evaluation of the environmental impacts, the NRC staff concludes that the proposed increase in power would not result in a significant environmental impact as discussed below.

Radiological Environmental Assessment:Radioactive Waste (Radwaste) Management

SCE has evaluated the system/component activity inventories and activity releases associated with the liquid, gaseous, and solid waste management systems, as well as the process and effluent radiological monitoring and sampling systems. SONGS radwaste management and radiation protection analyses are based on the Units 2 and 3 Cycle 1 core activity inventory profile with one percent fuel cladding defects. The licensee has determined that the activity inventories of Cycle 1 core isotopes (primarily some iodine and noble gas isotopes) are greater than the core activity inventories associated with 102 percent of current licensed power, i.e., 3458 MWt. The licensee has also evaluated the dose contributions of iodine, noble gas, and particulate core isotopes for the power uprate conditions. Based on its evaluation, the licensee determined that the core and system activity profiles of record bound (i.e., are equal to, or more severe than) the core and system activity source terms at the proposed uprated power level. Therefore, the licensee has concluded that its operation of the radwaste systems at SONGS Units 2 and 3 will not be impacted by operation at uprated power conditions and the effluents discharged would continue to meet the requirements of 10 CFR

Part 20 and 10 CFR Part 50, Appendix I. Based on the above, the staff has determined that the proposed power uprate will not appreciably affect the ability to process liquid or gaseous radioactive effluents and there are no significant environmental effects from radiological releases.

#### Dose Consideration

SCE evaluated the effects of power uprate on the radiation sources within the plant and radiation levels during normal and post-accident conditions. Based on its evaluation, the licensee determined that SONGS Units 2 and 3 dose contributions and the activity inventories of Cycle 1 core isotopes (primarily some iodine and noble gas isotopes) are greater than the dose consequences and core activity inventories associated with the 102 percent of the current licensed power, i.e., 3458 MWt, and therefore bound the proposed uprated power level. Further occupational doses for normal operations will be maintained within acceptable limits by the site's as-low-as-reasonably-achievable program, which is required by 10 CFR 20.1101(b).

Therefore, the NRC staff concludes that the radiological doses would remain below the 10 CFR Part 100 guidelines and all radiological safety margins are maintained.

#### Summary

The proposed power uprate will not significantly increase the probability or consequences of accidents, will not involve any new radiological release pathways, will not result in a significant increase in occupational or public radiation exposure, and will not result in significant additional fuel cycle environmental impacts. Accordingly, the NRC staff concludes that there are no significant radiological environmental impacts associated with the proposed action.

#### Non-Radiological Environmental Assessment:

The licensee reviewed the non-radiological environmental impacts of the requested power uprate based on information submitted in the Environmental Report, Operating License Stage, the NRC Final Environmental Statement (FES) related to the operation of San Onofre Nuclear Station, Units 2 and 3, (NUREG-0490, dated April 1981), and the requirements of the Environmental Protection Plan. Based on this review, the licensee concluded that the proposed power uprate would have no significant effect on the non-radiological elements of concern and the plant will be operated in an environmentally acceptable manner as established by the FES. In addition, the licensee states that existing Federal, State, and local regulatory permits presently in effect accommodate the power uprate without modification.

The SONGS units are cooled by once-through cooling water systems, withdrawing cooling water from the Pacific Ocean and discharging it to the ocean through separate underwater diffusers on the ocean bottom. The licensee determined that the differential temperature developed by the cooling system will increase by approximately 0.3°F, increasing the calculated differential to approximately 19.2°F. The limit on differential temperature allowed by the California Regional Water Quality Control Board, San Diego Region, is 25°F and includes an allowance of 0.4°F for increases in thermal power level. The licensee also evaluated other environmental discharges and determined that the small increase in reactor power will not have significant impact on the environment.

SONGS operates in compliance with a National Pollution Discharge Elimination System (NPDES) Permit, which requires all effluents to be closely monitored to assure compliance with the permit levels. Effluent increases due to the power uprate of SONGS Units 2 and 3 are not expected. With regard to potential non-radiological impacts, the proposed action would not change the method of operation at SONGS or the methods of handling effluents. No changes to land use would result and the proposed action does not involve any historic sites. Therefore, no new or different types of non-radiological environmental impacts are expected. Accordingly,

the NRC staff concludes that there are no significant non-radiological environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

As an alternative to the proposed action, the NRC staff considered denial of the proposed action (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the FES for SONGS Units 2 and 3 dated March 1973.

Agencies and Persons Consulted:

In accordance with its stated policy, on June 7, 2001, the NRC staff consulted with the California State official, Mr. Steve Hsu, of the Radiologic Health Branch of the State Department of Health Services, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC staff concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated April 3, 2001, and the supplements dated April 23, May 11, May 25, and May 31, 2001, which may be examined, and/or copied for a fee, at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the ADAMS Public Library component on the NRC

Web site, <http://www.nrc.gov>, (the Electronic Reading Room). If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, or 301-415-4737, or by e-mail to [pdr@nrc.gov](mailto:pdr@nrc.gov).

Dated at Rockville, Maryland this 13<sup>th</sup> day of June 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

***/RA/***

Joseph E. Donoghue, Senior Project Manager  
Project Directorate IV, Section 2  
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Office of Nuclear Reactor Regulation