



*Southern California Edison Company*

23 PARKER STREET  
IRVINE, CALIFORNIA 92718

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F. R. NANDY  
MANAGER, NUCLEAR LICENSING

TELEPHONE  
(714) 587-5400

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

Subject: Docket No. 50-206  
Clarification of Spent Fuel Pool (SFP) Cooling System Operation  
San Onofre Nuclear Generating Station  
Unit 1

This letter clarifies two issues concerning operation of the SFP which relate to Amendment No. 132 to the San Onofre Unit 1 License. The two subjects needing clarification are: 1) the measures that will be implemented in the unlikely event that extended repairs become necessary for the primary SFP Cooling System pump and 2) the provisions for substitution of the Component Cooling Water (CCW) heat exchanger for the SFP heat exchanger. Each of these topics have been discussed with the NRC Project Manager for San Onofre Unit 1.

BACKGROUND

The modifications performed to connect the spare pump are described in Amendment No. 132. That amendment approved placing a higher heat load in the SFP than is currently described in the Unit 1 Updated Final Safety Analysis Report (UFSAR). The connection design for the spare pump features a non-safety related power supply (which will be upgraded to safety-related prior to the Cycle 12 outage), safety-related piping and valves designed to the seismic and quality standards of the existing system, and dual isolation valves for each cooling pump (see enclosed figure). Dual isolation has been provided for each pump to eliminate the possibility of a recirculation flow path which could result in reduced flow to the SFP cooling heat exchanger.

The SFP Cooling System normal alignment has the primary cooling pump in operation with both spare pump isolation valves closed. If the primary pump fails or is removed from service for preventative maintenance, the cooling system can be operated with the primary pump isolated and the spare pump in-service. However, operation of the system in this latter alignment does not permit normal SFP purification flow (see enclosed figure). Therefore, if such operation is required for extended periods, SCE will take the temporary measures listed below to re-establish SFP purification flow.

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PROVISIONS FOR EXTENDED PUMP REPAIR

If the duration of repairs on the primary pump require extended periods of operation on the backup pump, SCE will implement the following measures to assure operation of the SFP Cooling System and re-initiate the SFP cleanup function:

- Install blind flanges on the flanged connections upstream and downstream of the primary pump at the locations indicated in the enclosed figure to isolate the inoperable primary cooling pump.
- Open the primary pump's downstream isolation valve to allow a portion of the coolant to flow through the ion exchanger with the spare pump in operation.

SUBSTITUTION OF CCW HEAT EXCHANGER

Section 9.1.3.4 of the Unit 1 UFSAR discusses temporary provisions for substitution of the lower CCW heat exchanger for the SFP heat exchanger. These provisions include flanged connections on the existing piping and temporary flexible hoses and piping that would have to be installed should interim operation in this configuration be required.

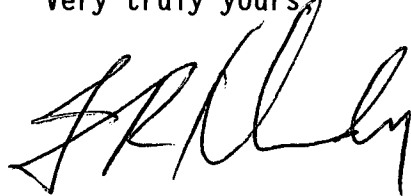
Amendment No. 132 found that consideration of failure of the SFP heat exchanger for postulated full core off-load conditions is not required under present NRC guidelines. The amendment also stated that the reference in Section 9.1.3.4 of the UFSAR for use of this emergency CCW/SFP heat exchanger substitution can be omitted.

However, the NRC amendment did not specify whether the provisions for substitution of the CCW heat exchanger must be maintained for other conditions (e.g., for SFP heat exchanger maintenance per UFSAR Section 9.1.3.3.2). During a phone conversation with the NRC, it was concluded that the provisions for CCW/SFP heat exchanger substitution must be retained; however, reliance on this capability to recover from a postulated failure of the SFP heat exchanger during full core off-load conditions is not required. SCE will revise UFSAR Section 9.1.3.4 to omit reference to the heat exchanger substitution for maximum abnormal heat load conditions but retain the provision for substitution of the CCW heat exchanger for all other conditions. The ability to interconnect the CCW heat exchanger may be of value in accommodating

maintenance on the SFP heat exchanger or in recovering from a failure of that heat exchanger during extended periods of operation under lower heat load conditions.

If you have any questions on this matter, please contact me.

Very truly yours,

A handwritten signature in black ink, appearing to read "J. B. Martin". The signature is written in a cursive style with a large, prominent initial "J".

Enclosure

cc: J. B. Martin, Regional Administrator, NRC Region V  
C. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2 and 3

**SCHEMATIC DIAGRAM OF MODIFIED SPENT FUEL  
POOL (SFP) COOLING SYSTEM (INCLUDING CONNECTION OF SPARE COOLING PUMP)**

