



*Southern California Edison Company*

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March 2, 1993

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

Gentlemen:

Subject: **Docket No. 50-206**  
**Seismically Qualified Source of Spent Fuel Pool Makeup Water**  
**During Permanently Defueled Condition**  
**San Onofre Nuclear Generating Station, Unit 1**

Reference: Letter, R. M. Rosenblum (SCE) to NRC Document Control Desk,  
"Operation and Surveillance Requirements for Permanently Defueled  
Condition for SONGS 1," September 21, 1992.

In the referenced letter, we committed to maintain the refueling water storage tank (RWST), or an equivalent water source, as a seismically qualified source of makeup water for the spent fuel pool (SFP). We also indicated that the capacity of the RWST for long-term seismically qualified service was being evaluated due to its present corrosion induced leakage. The RWST is the current seismic category A source of SFP makeup. Rather than perform additional evaluations or repair the RWST to ensure long-term compliance with seismic design requirements, we have decided to rely on the seismic category A auxiliary feedwater storage tank (AFWST). The AFWST will be available as the seismically qualified source of makeup water for the SFP within 30 days of the plant defueling. The RWST will not be maintained or inspected after the AFWST has been credited as a source of SFP makeup water.

Makeup water will normally be supplied to the SFP during the permanently defueled condition from the primary plant makeup tank. If that water source were to become unavailable and makeup to the SFP was required, the AFWST would be aligned to the SFP. Since a flow path does not presently exist between the AFWST and the SFP, a flexible, non-collapsible wall hose will be available so that water can be gravity fed from the AFWST into the SFP. The hose would be connected to an existing water connection on the turbine driven auxiliary feedwater pump suction piping and routed to the SFP only if the primary plant makeup tank became unavailable and makeup to the SFP was needed.

Administrative controls will be established to ensure that the hose can be installed within six hours. The capability to install the hose within six hours will be demonstrated by test prior to crediting the AFWST as a water source. We estimate that the SFP water level would drop less than one inch during the time required for hose installation. A one inch drop in water

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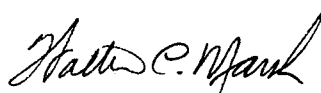
level would not significantly affect the cooling capacity or the radiation shielding provided by the SFP water.

A sufficient water level will be maintained in the AFWST so that at least 50,000 gallons of water can be gravity fed into the SFP at a flow rate of at least 12 gpm. As discussed below, this water volume and flow capability are sufficient to maintain the required SFP water level even with no SFP cooling in operation. We will verify at least once every seven days that the AFWST water level is above the required minimum level. This is the same surveillance frequency that is currently required for the SFP water level by Technical Specification 4.1.1, Table 4.1.2, Item 14a. The AFWST water does not need to be borated since, as discussed in Technical Specification 5.4, our analyses demonstrate that boration of the SFP is not necessary to maintain the required shutdown margin.

We have conservatively determined that the maximum SFP evaporation rate that could occur during the defueled condition is approximately 8.5 gpm. This result was obtained by calculating the SFP heat load in accordance with Branch Technical Position ASB 9-2, "Calculation of Decay Heat Loads," and by assuming SFP cooling was lost approximately 97 days after the final plant shutdown (i.e., on March 7, 1993, the scheduled completion date for the plant defueling). For an evaporation rate of 8.5 gpm, the 50,000 gallons of water from the AFWST represents over a four day supply of makeup for the SFP. Four days is sufficient time to either restore cooling or connect an alternate water source so that the SFP water level required by Technical Specification 3.8.B.2 (plant elevation 40 feet 3 inches which ensures that a minimum of 23 feet of water is above the stored fuel) can be maintained.

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

Very truly yours,



cc: J. B. Martin, Regional Administrator, NRC Region V  
S. W. Brown, NRC Project Manager, San Onofre Unit 1  
C. W. Caldwell, NRC Senior Resident Inspector, San Onofre Units 1, 2&3  
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