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Ladies and Gentlemen:

SPENT FUEL POOL COOLING SYSTEM
SALEM GENERATING STATION UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311

As documented in the NRC's letter dated September 19, 1997, "Summary of September 9, 1997, Meeting to Discuss Analysis of the Spent Fuel Liner," the following options were to be explored: revise the analysis to resolve the NRC concerns, conduct testing, or seismically qualify the Spent Fuel Pool Cooling System (SFPCS).
In letter LR-N980008, dated January 19, 1998, Public Service Electric and Gas (PSE&G) committed to seismically qualify the SFPCS to eliminate the need to postulate a loss of forced cooling, thereby precluding the need to evaluate the liner for boiling conditions. On March 12, 1998, the NRC issued a Request for Additional Information (RAI) regarding the SFPCS. In the RAI the NRC stated that, "although the NRC staff agrees that the qualification of the SFPCS to seismic category I requirements and the SFPCS being powered from vital sources address the extended loss of forced cooling to the SFP from LOOP and seismic events, the NRC staff is concerned that other initiating events within the design basis could result in a loss of SFP cooling resulting in elevated SFP temperature and leakage from the SFP liner." In response to the NRC's RAI, PSE&G committed in letter LR-N980157, dated May 8, 1998, to not only seismically upgrade the SFPCS but also to implement a permanent modification to either install isolation valve or caps on the SFP liner drains.

On June 16, 1998, PSE&G met with the NRC to discuss the status of the SFPCS upgrade. At this meeting PSE&G stated that the upgrade of the SFPCS was to be performed using the Seismic Qualification Utility Group (SQUG) "Generic Implementation Procedure (GIP) for Seismic Verification of Nuclear Plant Equipment,"

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approach. The presentation provided by PSE&G and a summary of the discussion is documented in NRC's meeting summary dated July 29, 1998.

PSE&G has reviewed the seismic adequacy of the components in the SFPCS in accordance with section 2.3.4 of the SQUG GIP methodology. A 10CFR50.59 safety evaluation is being performed to incorporate the verification of the seismic adequacy of the SFPCS using the SQUG GIP methodology into the Salem Updated Final Safety Analysis Report (UFSAR). Based on this evaluation, loss of the SFPCS during a seismic event is no longer postulated to be credible and therefore pool temperatures will be maintained below the design temperature of the SFP liner.

In regards to other events, an evaluation of the SFPCS' ability to withstand failures, heat exchanger performance, internal/external hazards, environmental qualification and system maintenance was performed. The SFPCS for each unit contains two 100% capacity non-safety related pumps and motors. The motors for each pump are connected to separate Class 1E power sources that are backed by the Emergency Diesel Generators (EDGs). The SFPCS heat exchanger is a safety-related component that is cooled by the safety-related Component Cooling Water (CCW) system. The SFPCS piping flowpath is aligned manually (valves are manually positioned) with the pumps and motors being the only active system components relied upon to support pool cooling.

Based on the above system evaluation, the SFPCS was also determined to remain functional, with an interruption of forced flow due to necessity to restart the pumps, following a loss of offsite power (LOOP) and a Loss of Coolant Accident (LOCA). An evaluation of the CCW heat load removal ability and the SFP heat load was performed which determined that there is sufficient time for the operators to re-establish SFP cooling prior to exceeding the design temperature of the SFP liner. To ensure the reliability of the SFPCS pumps, these pumps are being added to the Inservice Test (IST) program.

In the unlikely event that the SFPCS is lost, PSE&G is performing a modification to cap the SFP liner drains. The modification will permanently attach the drain caps on chains in the vicinity of the SFP liner drains for the operators to install when the SFP temperature rises above 150 °F. Procedures are being revised to include the necessary steps to direct the operators to install the liner drain caps. Based on typical full core off-load heat loads, operators will have approximately 2 hours to cap the liner drains before the temperature in the SFP reaches the liner design temperature of 180 °F.

If you have any questions concerning the contents of this submittal, please do not hesitate to contact us.

Sincerely,

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