Public Service
Electric and Gas
Company

JUL 06 1993

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NLR-N93087

United States Nuclear Regulatory Commission
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Washington, DC 20555

Gentlemen:

FUEL UPGRADE AND MARGIN RECOVERY PROJECT
JUSTIFICATION FOR APPLYING LEAK-BEFORE-BREAK
TECHNOLOGY TO REACTOR COOLANT SYSTEM PIPING
SALEM GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

Attachment 1 contains the non-proprietary Westinghouse report WCAP-13660, "Technical Justification for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for the Salem Generating Station Units 1 and 2." Attachment 2 contains WCAP-13659, which is the proprietary version of the same report. **Because of the proprietary nature of Attachment 2, PSE&G requests that it be withheld from publication in the NRC Public Document Room.** Attachment 3 contains a copyright notice applicable to Attachments 1 and 2, and an application for withholding Attachment 2 from public disclosure, pursuant to 10 CFR 2.790(b)(1).

Inservice inspection of Reactor Coolant System (RCS) piping and components is performed at Salem Generating Station (SGS), in accordance with program requirements adopted per Technical Specification 4.0.5 and ASME Section XI. Operability and augmented inspection requirements for snubbers are prescribed by Technical Specification 3/4.7.9. RCS leak detection methods of the type recommended by Regulatory Guide 1.45 are used to measure unidentified leakage, which is limited by Technical Specification 3/4.4 to one gallon per minute. These provisions, combined with the evaluations contained in Attachment 2, justify the application of leak-before-break technology to the RCS primary loop piping for SGS Units 1 and 2.

Therefore, in accordance with General Design Criterion 4 of 10 CFR 50, Appendix A, PSE&G hereby requests approval of the elimination of the dynamic effects associated with postulated RCS primary loop pipe ruptures from the SGS design basis, based on the technical justification provided herein.

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If approved, the elimination of dynamic effects would allow for the future removal of pipe whip restraints on the primary loop piping. Removal of these restraints would improve the piping systems' response to thermal and seismic loads. It would also improve accessibility of the piping for maintenance and inservice inspection, resulting in economic benefits and reduction in overall occupational radiation exposure.

The Fuel Upgrade / Margin Recovery Project (FU/MRP) includes revised Nuclear Steam Supply System (NSSS) component analyses to account for increased allowable steam generator tube plugging and reduced RCS flow. The component analyses will be predicated on the elimination of dynamic effects from postulated primary loop piping ruptures. Therefore, application of leak-before-break is an integral part of the FU/MRP. Details of the NSSS component analyses and a request for license amendment for RCS flow will be included in a future FU/MRP submittal.

The technical evaluation described in Attachments 1 and 2 are applicable to the present Salem as-built configuration, and would remain applicable to the post-FU/MRP configuration.

Please feel free to contact us if there are any questions regarding this submittal.

Sincerely,

J. J. Hagan
Vice President -
Nuclear Operations

Attachments (3)
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ATTACHMENT 1

ATTACHMENT 3