

Public Service
Electric and Gas
Company

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Vice President and Chief Nuclear Officer

October 26, 1988

NLR-N88181

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Gentlemen;

SUPPLEMENTAL INFORMATION; EMERGENCY LICENSE AMENDMENT REQUEST
TECHNICAL SPECIFICATION 3/4.2.3
SALEM GENERATING STATION UNIT NO. 2
DOCKET NO. 50-311
FACILITY OPERATING LICENSE DPR-75

Public Service Electric and Gas Company (PSE&G) hereby submits Enclosure 1 to this letter in response to your questions relative to the above subject. Enclosure 2 provides retyped Technical Specification pages reflecting incorporation of responses to comments made by your staff. We trust that the enclosed information will be sufficient to conclude your review of the proposed Emergency License Amendment request.

If we can be of any further assistance in this matter, please feel free to contact us.

Sincerely,



Enclosures

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Licensing Project Manager

Mr. R. W. Borchardt
Senior Resident Inspector

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ENCLOSURE 1

- 1) What was the RCS flow rate determined during the last calorimetric.

PSE&G Response

368,665 gpm total for four loops.

- 2) Provide a reference for the RCS flow measurement uncertainty calculation methodology and identify any differences between the reference methodology and the Salem Unit 2 calculation contained in WCAP-11579.

PSE&G Response

The methodology employed in the analysis of of RCS flow calorimetric uncertainties is the same as that used for the Shearon Harris plant with the following modifications;

- a) The Salem calculations utilize 3 hot-leg RTDs instead of one
 - b) The hot-leg streaming factor used for Salem ($\pm 1.5^{\circ}\text{F}$) reflects placement of the hot-leg RTDs in thermal wells in the scoops instead of scoops supplying the bypass manifolds.
- 3) What is the stated drift for the installed thermowell RTDs and what value is assumed in the uncertainty analysis.

PSE&G Response

The manufacturers quoted value for RTD drift is $+0.4^{\circ}\text{F}$ in 22.5 months. No drift is assumed in the RCS Flow Calorimetric uncertainty calculation due to the fact that the RTDs are cross calibrated prior to reactor startup following a refueling outage. This calibration is performed with the RCS at operating temperature and pressure and therefore eliminates drift as a factor in the uncertainty calculation.

- 4a) Describe the calibration procedure.

PSE&G Response

A cross calibration is performed on each of the 8 RTDs in each RCS loop (i.e. 3 T-hot/3 spare and 1 T-cold/1 spare). The averaged value of the RTD readings is then compared to the individual RTD reading. Any RTD reading deviating from the average by greater than $\pm 0.5^{\circ}\text{F}$ is failed. Additionally, a cross comparison of the 4 loops is made using the averaged value of all T-hot RTDs. Any RTD reading deviating by greater than $\pm 2.0^{\circ}\text{F}$ is failed.

Any failed RTDs are either switched to a spare RTD, or if a spare is unavailable, the RTD is replaced.

4b) How is the original calibration accuracy established.

PSE&G Response

The RTD manufacturer calibrates the RTDs prior to shipment using recognized criteria. These criteria typically require comparison at the freezing and boiling points of water and one or two known temperatures in excess of 212°F.

4c) How does PSE&G intend to monitor the installed thermowell RTDs for unacceptable drift and what corrective action will be taken if unacceptable drift is identified.

PSE&G Response

PSE&G has committed to remove 2 RTDs from Salem Unit 1 during each of the next 2 refueling outages. These RTDs will be turned over to the manufacturer for recalibration to determine the actual drift experienced. PSE&G will review this data, as well as data anticipated to be available from other sources, in order to establish an appropriate long-range program for periodic RTD replacement.

ENCLOSURE 2