Public Service
Electric and Gas
Company

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

Gentlemen:

ANNUAL 10CFR50.46 REPORT
SALEM GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

Pursuant to the requirements of 10CFR50.46, Public Service Electric & Gas (PSE&G) hereby transmits our annual report describing the changes to the Salem Unit Nos. 1 and 2 ECCS Evaluation Models and to our licensing basis Large Break (LB) and Small Break (SB) Loss Of Coolant Accident (LOCA) analyses results for Peak Clad Temperature (PCT). In our last annual report, dated July 31, 1991, we reported PCT values of 2112°F for LBLOCA and 1728°F for SBLOCA. On April 24, 1992, in accordance with the provisions of 10CFR50.90, PSE&G transmitted License Amendment Application, LCR 91-03, ECCS Flow Balance Surveillance which is currently under NRC review. The relaxation of flow balance requirements requested in LCR 91-03 introduces a change of 184°F in the Salem Unit Nos. 1 and 2 SBLOCA PCT which will result in a net permanent SBLOCA PCT of 1912°F. LCR 91-03 does not affect LBLOCA analyses PCT results.

Additionally, on July 15, 1992, PSE&G received a Westinghouse report indicating that no changes to the Westinghouse ECCS Evaluation Model have been implemented since our last annual PCT report. Therefore, the Salem LBLOCA analysis PCT value remains at 2112°F. However, as described in the following, the Salem SBLOCA analysis PCT value can be unfavorably impacted by a current issue involving potentially reduced Main Steam Safety Valve (MSSV) flow rates.

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As discussed in a telecon with Mr. J. Stone, NRC Licensing Project Manager, and Mr. F. Orr, of Reactor Systems Branch, in June of this year:

Westinghouse has indicated that, using the overly conservative 1975 WFLASH SBLOCA methodology previously applied to our Salem plants, and starting with a PCT value which assumes the implementation of LCR 91-03 ECCS Surveillance relaxations (ie., 1912°F), an assessment of the effect of the postulated reduced MSSV flows might have resulted in a estimated PCT above the 2200°F acceptance criterion.

However, results of SBLOCA calculations performed using the current NRC-approved Westinghouse ECCS NOTRUMP Model have shown significant reductions in calculated PCT when compared to results obtained using WFLASH. Results of a Westinghouse generic study show a PCT reduction of 537°F for a 4-inch diameter break in a 4 loop plant. Additionally, a Salem-specific 4-inch diameter break NOTRUMP calculation, recently performed by Westinghouse as part of a rerating feasibility study, resulted in a PCT of 1461°F.

Using this Salem-specific NOTRUMP analysis as a basis, Westinghouse has performed evaluations to determine the effects on the PCT result due to: 1) Salem current licensed core power level conditions, 2) conservatively reduced MSSV flow rates, 3) LCR 91-03 ECCS flow balancing relaxations, and 4) NOTRUMP model changes which have occurred since the Salem rerating feasibility study calculation. These evaluations increase the calculated PCT by 197°F, resulting in a calculated PCT of 1658°F. This more realistic, yet conservative NOTRUMP-based SBLOCA PCT of 1658°F is significantly less than the 2200°F acceptance criteria. Although this evaluation was done only for the currently limiting 4-inch diameter break, conditions that exist with the reduced MSSV flows and the 91-03 ECCS flow balance relaxation indicate that the 4-inch break will likely remain limiting. PSE&G has contracted Westinghouse to perform a complete-spectrum NOTRUMP analysis for the Salem Units by March 1993.

Therefore, PSE&G is taking this opportunity, as part of the 10CFR50.46 annual report, to notify the NRC of our intention to change our SBLOCA methodology to the Westinghouse NOTRUMP model. In support of this change, PSE&G has established a NOTRUMP based SBLOCA analysis PCT value of 1658°F and plans to assess future ECCS Evaluation Model changes using NOTRUMP-based methodology.

In summary, the Salem Units 1 and 2 LBLOCA analysis PCT value is unchanged since the last PCT annual update and remains 2112°F. The Salem Units 1 & 2 SBLOCA analysis PCT value has been re-baselined to a NOTRUMP methodology based value of 1658°F.

Should you have any questions concerning this transmittal, please contact us.

Sincerely,

C Mr. T. T. Martin, Administrator
USNRC Region I

Mr. J. C. Stone
USNRC Licensing Project Manager

Mr. T. P. Johnson
USNRC Senior Resident Inspector

Mr. K. Tosch, Chief,
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