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Electric and Gas
Company

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U.S. Nuclear Regulatory Commission
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Gentlemen:

ANNUAL PEAK FUEL CLAD TEMPERATURE REPORT
SALEM GENERATING STATION UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

References:

- 1) Letter from S. LaBruna (PSE&G) to U.S. NRC dated July 12, 1993 (NLR-N93112), "Annual Peak Fuel Clad Temperature Report, Salem Generating Station Units 1 & 2."
- 2) Letter from J. C. Stone (U.S. NRC) to PSE&G dated August 25, 1993, "Small Break Loss of Coolant Accident NOTRUMP Analysis Methodology, Salem Nuclear Generating Station, Units 1 and 2 (TAC NOS. M86144 and M86145)."
- 3) Letter from S. LaBruna (PSE&G) to U.S. NRC dated October 29, 1993 (NLR-N93173), "Significant Peak Fuel Clad Temperature Changes, Salem Generating Station Units 1 & 2."

Pursuant to the requirements of 10CFR50.46, Public Service Electric and Gas Company (PSE&G) hereby submits our annual report describing the changes to the calculated Peak Clad Temperature (PCT) for the Salem Generating Station (SGS) Large and Small Break Loss of Coolant Accident (LB LOCA and SB LOCA) analyses. The current PCT is 1551 degrees F for SB LOCA and 2126 degrees F for LB LOCA.

Small Break LOCA

The annual 10CFR50.46 report for 1993 (Reference 1) reported a SB LOCA PCT of 1658 degrees F. Subsequent to the 1993 annual report, NRC approval of the NOTRUMP methodology for SGS resulted in a SB LOCA PCT of 1580 degrees F (Reference 2). Significant PCT changes to the SGS NOTRUMP analyses were reported via Reference 3. These changes consisted of explicit modeling of safety injection to the broken loop, an offsetting model improvement relative to condensation of steam in the intact loops, and correction of discontinuities in the vertical flow regime map. The net effect of these changes was a 13 degree F decrease, resulting in a PCT of 1567 degrees F.

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One change has occurred to the last reported SB LOCA PCT, due to corrections of the reactor vessel and steam generator geometric and mass calculations in the VESCAL subroutine of the LUCIFER code. Corrections to the LUCIFER code resulted in a PCT decrease of 16 degrees F, resulting in the current SB LOCA PCT of 1551 degrees F.

Large Break LOCA

The annual 10CFR50.46 report for 1993 (Reference 1) reported a LB LOCA PCT of 2109 degrees F. Two changes have occurred to the last reported LB LOCA PCT. Corrections to the LUCIFER code described above resulted in a PCT decrease of 6 degrees F. A PCT increase of 23 degrees F is being conservatively applied account for potential ECCS flow diversion via double disk gate valve pressure equalization paths. These changes result in the current reported LB LOCA PCT of 2126 degrees F.

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

Sincerely,



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