May 26, 1989

Docket Nos. 50-272/311

Mr. Steven E. Miltenberger Vice President and Chief Nuclear Officer Public Service Electric & Gas Company Post Office Box 236 Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: TECHNICAL SPECIFICATIONS FOR PRESSURE/TEMPERATURE LIMITS (LCR 88-14) (TAC NOS. 71774/71775)

RE: SALEM GENERATING STATION, UNIT NOS. 1 AND 2

By letter dated December 28, 1988, (LCR 88-14) Public Service Electric and Gas Company requested a change to the pressure/temperature limits in the Salem 1 and 2 Technical Specifications. During the review, the staff developed the enclosed questions concerning your application.

Please respond to the questions within 60-days of receipt of this letter. The reporting and/or record keeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

/s/

James C. Stone, Project Manager Project Directorate I-2 Division of Reactor Projects I/II Office of Nuclear Reactor Regulation

Enclosure: As stated

cc w/enclosure: See next page

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## UNITED STATES NUCLEAR REGULATORY COMMISS WASHINGTON, D. C. 20555

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comes C. Stone

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cc w/enclosure: See next page Mr. Steven E. Miltenberger Public Service Electric & Gas Company

## cc:

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## ENCLOSURE

## QUESTIONS - PRESSURE/TEMPERATURE LIMITS (LCR 88-14)

- A. WCAP-11955 describes the test results of specimens in Capsule Z at Salem
  1. The following questions relate to WCAP-11955 which provides the technical bases for the 12/28/88 submittal for Salem, Unit 1:
  - There was no discussion of weld metal in Section 4, Description of Program, in WCAP-11955. However, Table 4-1 discusses weld metal from Capsule Y. Table 4-2 and Table A-1 discusses a certain weld metal but we could not determine whether that weld metal was included in Capsule Z. Was there a weld metal included in Capsule Z?
  - 2. Assuming there was no weld metal in Capsule Z, then how was <sup>RT</sup>NDT of the weld metal calculated as shown on Pages A-7 and A-8. It appears that Westinghouse took the weld metal in Capsule Y (WCAP-11554) to be used in the P/T curves in WCAP-11955. Explain.
  - 3. Table A-1 showed three weld metals. Which weld metal is the limiting one? That is, which weld metal was used in the calculations on Pages A-7 and A-8?
  - 4. It appears that the chemistry factor of 272°F as shown on Page A-7 was obtained by using the copper and nickel contents of the weld metal. However, we could not determine how the chemistry factor of 158.9°F for the base plate was obtained. Regulatory Guide 1.99, Rev. 2, provides an alternative method (Section 2.1) to calculate the chemistry factor when two or more credible surveillance data sets become available. Explain how both chemistry factors (weld and base plate) were obtained.
  - 5. Figure A-2 in WCAP-11955 (corresponding to Figure 3.4-2 in the 12/28/88 submittal).

Provide detailed/hand calculations to show that when  $RT_{NDT}$  of 162°F is used in calculating P/T heatup curve that it is more conservative than if  $RT_{NDT}$  of 222.5°F is used.

- 6. Table 4-1 and Table A-1 show inconsistent copper and nickel contents for the base plate B2402-1 and weld metal. Explain. What are the exact percentages of copper and nickel contents used in the calculation of  $RT_{NNT}$  of the B2402-1 plate and weld metal.
- B. Other Questions
  - 10 CFR 50, Appendix G, Section IV.2 specifies pressure and temperature requirements for the vessel closure flange region. Discuss whether Salem 1 and 2 P/T limits satisfy the requirements.

- 2. The Salem Unit 2 P/T curves (Figure 3.4-2 and 3.4-3) in the 12/28/88 submittal show two RT<sub>NDT</sub> values at <sup>1</sup>/<sub>4</sub>T and 3/4T locations. We could not determine which RI<sub>NDT</sub> was used for the heatup curve and which RT<sub>NDT</sub> was used for the Cooldown curve. Discuss.
- 3. Table B 3/4.4-1 of the Salem Unit 2 Technical Specification revision in the 12/28/88 submittal: The limiting longitudinal weld in Figure 3.4-2 and 3.4-3 of the Salem 2 Technical Specification revision show the copper content of 0.35% and nickel content 1.00%. This chemical composition is inconsistent with the weld metals in Table B 3/4.4-1.

- 2 -