Public Service
Electric and Gas
Company

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

Gentlemen:

TECHNICAL SPECIFICATIONS - INADEQUATE CORE COOLING
REQUEST FOR ADDITIONAL INFORMATION
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

This letter is being provided in response to the NRC request on the above subject, dated May 23, 1989. This response also reflects a telephone conversation with Mr. Mohan Thadani and Mr. Wayne Hodges on July 25, 1989. Per agreement on August 1, 1989 with Mr. J. Stone, NRC Licensing Project Manager, this information is being submitted after the due date.

1. A revision to the previously submitted License Change Request (LCR 87-10) will be submitted by October 31, 1989. This revision will include revised action statements for the Reactor Vessel Level Indication System that allow an alternate method to be established pursuant to a telecon held on July 25, 1989. See Attachment 1 for details.

2. PSE&G hereby confirms that the Salem SPDS computer is capable of providing subcooling margin indication in addition to the Plant P250 computer. Input to the P250 and SPDS is supplied by bottom mounted thermocouples which are Class 1E through microprocessors and up to their signal isolators. From the signal isolator, the thermocouple readings are directed to both the P250 computer and the SPDS, where subcooling margin can be directly read by the operators. During the preparation of the response to your letter dated May 23, 1989, it was identified that the existing system might not fully comply with the requirements of NUREG-0737 in that two independent channels do not exist. This was confirmed in a telecon with Mr. J. Stone and Mr. T. Huang of the NRC staff on August 17, 1989. PSE&G's review of this issue indicates that the discrepancy may be the result

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of a misunderstanding of what constituted an acceptable design as discussed in a meeting held with the NRC on December 3, 1985. A summary of the commitments made at that meeting was presented in PSE&G letter NLR-N86006 dated January 17, 1986. This letter indicates that the P250 computer and the SPDS would be utilized as the displays for the subcooling margin monitor. The letter also indicates that the backup display channels of core thermocouple readings would be cross-fed to either the SPDS or P250 to provide full core coverage on each device. However, the independence of each channel was not specifically discussed, so it is unclear what may have been agreed upon relative to channel independence.

As a result of PSE&G's investigations and the August 17, 1989 telecon, PSE&G will install a system that meets the requirements of NUREG-0737 for the subcooling margin monitor. These modifications will be performed during the Fall 1990 for Unit 1 and the Fall 1991 outage for Unit 2. PSE&G will submit a License Change Request to reflect the modified system and the guidance of Generic Letter 83-37, to be effective upon completion of the respective outages. In the interim, PSE&G proposes to use the existing specifications.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Attachment

C Mr. J. C. Stone, Licensing Project Manager

Ms. K. Halvey Gibson, Senior Resident Inspector

Mr. W. T. Russell, Administrator
Region I

Mr. Kent Tosch, Chief
New Jersey Department of Environmental Protection
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ATTACHMENT 1
RVLIS AVAILABILITY

Based on conversations with Mr. Wayne Hodges and Mr. Mohan Thadani the following information is provided in support of the Technical Specification proposed for the Salem RVLIS (Reactor Vessel Level Indication System). The RVLIS currently installed at Salem is a Westinghouse model 8080. This model is one of the initial models developed by Westinghouse to meet the NUREG 0737 requirements. This model has subsequently been discontinued and Salem is one of three Westinghouse PWRs in the United States currently using this model. As a result, spare parts availability is limited. The only parts generally available are in a users pool with frequently only one item of each specific part available at any time. Failures are usually addressed by replacement of the failed part from the pool, with the failed part then being repaired and placed back in the pool. Consequently, downtime on the system can potentially be extensive if a part is not available due to a similar failure at another plant or the part simply not being available.

Since 1986 the RVLIS at Salem has experienced nine failures with the repair time of seven of those failures exceeding the proposed action statement. Conversations with other 2 utilities using the 8080 system indicate that one plant has a similar history of failures while the other plant has had a minimal number of power supply failures only.

To remedy this situation, PSE&G has ordered an improved RVLIS. The improved system is scheduled for installation into Salem 2 during the 6th refueling outage currently scheduled for the Fall of 1991 and for Salem 1 during the 10th refueling outage currently scheduled for the Spring of 1992. In the interim, PSE&G is proposing that the following action statements apply for RVLIS with 1 or 2 channels inoperable:

"With the number of OPERABLE channels one less than the Required or Minimum number of channels shown in Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or:

1. Operation may proceed provided the Required Channels shown in Table 3.3-11 for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples are OPERABLE. With the number of OPERABLE channels for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples shown in Table 3.3-11 less than the Required Number of Channels, follow the associated Action Statement, and

2. Restore the system to OPERABLE status at the next scheduled CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN)".

This is different than previously requested in that the alternate systems are required for both required and minimum action statements.