



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

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United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS  
POSITION INDICATION SYSTEM - SHUTDOWN  
SALEM GENERATING STATION, UNIT NOS. 1 AND 2  
FACILITY OPERATING LICENSE DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311**

In accordance with 10CFR50.90, Public Service Electric & Gas (PSE&G) Company hereby requests a revision to the Technical Specifications (TS) for the Salem Generating Station (SGS). In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

The proposed change would remove the Technical Specifications related to group demand position indication in modes 3, 4 and 5. This requirement is unduly restrictive since adequate shutdown margin in modes 3, 4 and 5 can be assured by increases in the reactor coolant system boron concentration.

The proposed changes are similar to changes approved by the NRC for the Donald C. Cook Nuclear Plant, Unit No. 2, on May 2, 1996 and for the Zion Nuclear Power Station, Units 1 and 2, on November 26, 1996.

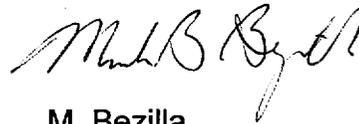
The proposed changes have been evaluated in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and a determination has been made that this request involves no significant hazards considerations. The basis for the requested change is provided in Attachment 1 to this letter. A 10CFR50.92 evaluation, with a determination of no significant hazards consideration, is provided in Attachment 2. The marked up Technical Specification pages affected by the proposed changes are provided in Attachment 3. Revised Technical Specification pages with the proposed changes incorporated are provided in Attachment 4.

The power is in your hands.

*J. For*  
*Acc*

Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance, but that an implementation period of sixty days be allowed to provide sufficient time for associated administrative activities. Should you have any questions regarding this request, please contact Mr. Paul Duke at 856-339-1466.

Sincerely,

A handwritten signature in cursive script, appearing to read "M. Bezilla".

M. Bezilla  
Vice President - Operations

Affidavit  
Attachments (4)

C Mr. H. Miller, Administrator - Region I  
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USNRC Senior Resident Inspector - SGS (X24)

Mr. K. Tosch, Manager IV  
Bureau of Nuclear Engineering  
P. O. Box 415  
Trenton, NJ 08625



**SALEM GENERATING STATION  
FACILITY OPERATING LICENSES DPR-70 & DPR-75  
DOCKET NOS. 50-272 & 50-311  
REVISIONS TO THE TECHNICAL SPECIFICATIONS (TS)**

**BASIS FOR REQUESTED CHANGE:**

Public Service Electric and Gas Company (PSE&G), under Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, requests that the Technical Specifications contained in Appendix A to the Operating License for Units 1 and 2 be amended as proposed herein to remove Technical Specifications (TS) 3/4.1.3.2.2 which are related to shutdown and control rod group demand position indication in modes 3, 4 and 5.

**REQUESTED CHANGE, PURPOSE AND BACKGROUND:**

The TS changes associated with this request are contained in Attachment 3. The proposed changes delete TS 3/4.1.3.2.2 for Salem Unit 1 and Unit 2. The current Technical Specifications require the group demand position indicator to be OPERABLE for each shutdown and control rod not fully inserted in modes 3, 4 and 5. In addition, during full length rod testing, only one shutdown or control bank at a time may be withdrawn from the fully inserted position, and  $K_{eff}$  is required to be maintained less than or equal to 0.95. These requirements are unduly restrictive since adequate shutdown margin in modes 3, 4 and 5 can be assured by increases in the reactor coolant system boron concentration.

The proposed changes are similar to changes approved by the NRC for the Donald C. Cook Nuclear Plant, Unit No. 2, on May 2, 1996 and for the Zion Nuclear Power Station, Units 1 and 2, on November 26, 1996.

**JUSTIFICATION OF REQUESTED CHANGES:**

During power operation, operability of the control rod position indicators is required to determine control rod positions and thereby ensure compliance with the control rod alignment and insertion limits. In modes 1 and 2, the operability and alignment of rods have the potential to affect the safety of the plant. In the shutdown modes, while the operability of the shutdown and control banks has the potential to affect the required shutdown margin (SDM), this effect can be compensated for by an increase in the boron concentration of the reactor coolant system.

In the shutdown condition, compliance with the shutdown margin requirements in TS 3/4.1.1 ensures that the reactor will be maintained sufficiently subcritical to preclude inadvertent criticality. The method for calculating required RCS boron concentration is controlled by procedure to ensure adequate SDM is maintained in modes 3, 4 and 5

when the reactor trip breakers are closed. Plant procedures will continue to ensure inadvertent criticality is precluded during full length rod testing. While more than one shutdown or control bank may be withdrawn from the fully inserted position at a time,  $K_{eff}$  will continue to be limited by procedure to 0.95 during full length control rod testing to preclude inadvertent criticality in the shutdown condition.

The regulatory requirements for content of plant Technical Specifications are contained in 10 CFR 50.36. Limiting conditions for operation and associated surveillance requirements are required for items which meet one or more of the following criteria: (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (4) a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. Adequate shutdown capability is maintained by boration as required by TS 3/4.1.1. Operability of the shutdown and control rod group demand position indication is not required in modes 3, 4 and 5 to ensure the ability of the plant to be shutdown and therefore is not required by 10 CFR 50.36.

The proposed change is also consistent with the Standard Technical Specifications for Westinghouse Plants, NUREG-1431, Rev. 1, which deleted the requirement for group demand position indication in modes 3, 4 and 5.

**ENVIRONMENTAL IMPACT:**

The proposed TS changes were reviewed against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, a significant increase in the amounts of effluents that may be released offsite, or a significant increase in the individual or cumulative occupational radiation exposures. Based on the foregoing, PSE&G concludes that the proposed TS changes meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirements for an Environmental Impact Statement.

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FACILITY OPERATING LICENSES DPR-70 & DPR-75  
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10CFR50.92 EVALUATION

Public Service Electric & Gas (PSE&G) has concluded that the proposed changes to the Salem Generating Station (SGS) Technical Specifications do not involve a significant hazards consideration. In support of this determination, an evaluation of each of the three standards set forth in 10CFR50.92 is provided below.

**REQUESTED CHANGE**

The proposed change would remove Technical Specifications (TS) 3/4.1.3.2.2 which are related to shutdown and control rod group demand position indication in modes 3, 4 and 5.

**BASIS**

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed TS change does not involve any physical changes to plant structures, systems or components (SSC). Shutdown margin will continue to be maintained as required by plant Technical Specifications to ensure the reactor will be maintained sufficiently subcritical to preclude inadvertent criticality in the shutdown condition. Shutdown and control rod group demand position indication is not required to ensure adequate shutdown margin in modes 3, 4 and 5 and therefore cannot contribute to the initiation of any accident. The proposed changes do not change or alter the design assumptions for the systems or components used to mitigate the consequences of an accident, and the initial conditions and methodologies used in the accident analyses remain unchanged. Therefore, accident analyses results are not impacted. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not involve any physical changes to plant structures, systems or components. The safety functions of the related structures, systems, or components are not changed in any manner, nor is the reliability of any structures, systems, or components reduced. No new or different type of equipment will be installed by this requested change. Therefore, no new failure modes or potential

accident initiators are introduced. Therefore, the proposed amendments do not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. *The proposed change does not involve a significant reduction in a margin of safety.*

Shutdown margin will continue to be maintained in accordance with the requirements of TS 3/4.1.1. The reactor will be maintained sufficiently subcritical to preclude inadvertent criticality in the shutdown condition. Therefore, the proposed amendments do not involve a significant reduction in the margin of safety.

## CONCLUSION

Based on the above, PSE&G has determined that the proposed changes do not involve a significant hazards consideration.

**SALEM GENERATING STATION  
FACILITY OPERATING LICENSES DPR-70 & DPR-75  
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REVISIONS TO THE TECHNICAL SPECIFICATIONS (TS)**

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. DPR-70 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.1.3.2.2	3/4 1-20
4.1.3.2.2	3/4 1-20

The following Technical Specifications for Facility Operating License No. DPR-75 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.1.3.2.2	3/4 1-17
4.1.3.2.2	3/4 1-17

REACTIVITY CONTROL SYSTEMS

POSITION INDICATION SYSTEM SHUTDOWN

LIMITING CONDITION FOR OPERATION

=====

3.1.3.2.2 The group demand position indicator shall be OPERABLE for each shutdown and control rod not fully inserted. During the performance of individual full length (shutdown and control) rod testing measurement during rod position indication system calibration:

- a. Only one shutdown or control bank shall be withdrawn from the fully inserted position at a time, and
- b.  $K_{eff}$  shall be maintained less than or equal to 0.95.

APPLICABILITY: MODES 3\*, 4\*, and 5\*

ACTION:

With less than the above required group demand position indicator(s) OPERABLE, open the reactor trip system breakers.

SURVEILLANCE REQUIREMENTS

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4.1.3.2.2 Each of the above required group demand position indicator(s) shall be determined to be OPERABLE by movement of the associated control rod at least 10 steps in any one direction at least once per 31 days.

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\*With the reactor trip system breakers in the closed position

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REVISIONS TO THE TECHNICAL SPECIFICATIONS (TS)**

REVISED TECHNICAL SPECIFICATION PAGES

Salem Unit No. 1 - Facility Operating License No. DPR-70:

Page

3/4 1-20

Salem Unit No. 2 - Facility Operating License No. DPR-75:

Page

3/4 1-17

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