

Public Service  
Electric and Gas  
Company

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Vice President - Nuclear Operations

DEC 08 1993

NLR-N93163

LCR 91-06 (Rev. 2)

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Gentlemen:

REQUEST FOR LICENSE AMENDMENT  
INCORPORATION OF GENERIC LETTER 90-06 REQUIREMENTS  
SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311

In accordance with the requirements of 10 CFR 50.90, Public Service Electric and Gas Company (PSE&G) hereby submits a request for amendment of Facility Operating Licenses DPR-70 (Unit 1) and DPR-75 (Unit 2) of the Salem Generating Station. Pursuant to the requirements of 10 CFR 50.91(b)(1), a copy of this submittal has been sent to the state of New Jersey as indicated below.

By letter dated November 17, 1992 (NLR-N92156), Public Service Electric and Gas Company (PSE&G) requested an amendment of Facility Operating Licenses DPR-70 (Unit 1) and DPR-75 (Unit 2) of the Salem Generating Station. This proposed change would incorporate the requirements of NRC Generic Letter 90-06 pertaining to Power Operated Relief Valve (PORV) and Block Valve operability and low-temperature overpressure protection for light-water reactors.

A recent PSE&G review of NUREG-1431, Standard Technical Specifications for Westinghouse Plants, identified an additional change to the Request for Amendment. The Action Statements for Technical Specifications 3/4.4.3 and 3/4.4.5 for Salem Units 1 and 2, respectfully were revised to delete entry conditions associated with PORV leakage. The entry conditions are now based upon the capability of the PORV to be manually cycled consistent with the Action Statements contained in NUREG-1431. The NRC review of this license amendment also resulted in the identification of typographical errors concerning the Allowed Outage Times (AOT) for the PORVs provided in Technical Specifications 3/4.4.3 and 3/4.4.5 for Salem Units 1 and 2, respectfully. PSE&G therefore resubmits the Request for License Amendment to incorporate the guidelines of NUREG-1431 concerning PORV and Block valve operability, and correct the AOT typographical errors.

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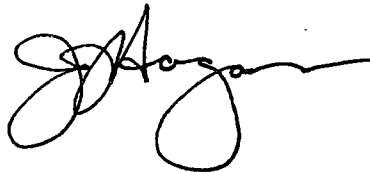
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Also, the proposed changes to Technical Specifications 3/4.1.2.3 and 3/4.1.2.4 have been deleted from this LCR. Additional changes to these Technical Specifications are currently under development. These changes are not related to the implementation of Generic Letter 90-06, and will be addressed in a future LCR submittal.

Attachment 1 of this submittal provides a detailed description and justification for the proposed changes. Attachment 2 contains marked up Technical Specifications reflecting the proposed changes. Revisions to the Request for Amendment and the marked up Technical Specifications are annotated by Revision bars.

Upon NRC approval, please issue a License Amendment which will be effective as of its date of issuance, but shall be implemented within 60 days to provide sufficient time for administrative changes.

Sincerely,



Attachment

C Mr. T. T. Martin, Administrator - Region 1  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
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Mr. J. Stone, Licensing Project Manager  
U. S. Nuclear Regulatory Commission  
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Mr. C. S. Marschall (S09)  
USNRC Senior Resident Inspector

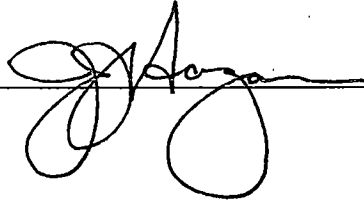
Mr. Kent Tosch, Manager, IV  
NJ Department of Environmental Protection  
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STATE OF NEW JERSEY       )  
                                  )  
COUNTY OF SALEM         )     SS.

J. J. Hagan, being duly sworn according to law deposes and says:

I am Vice President - Nuclear Operations of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning the Salem Generating Station, Unit Nos. 1 and 2, are true to the best of my knowledge, information and belief.



Subscribed and Sworn to before me  
this 8th day of December, 1993

  
Notary Public of New Jersey

My Commission expires on \_\_\_\_\_  
KIMBERLY JO BROWN  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires April 21, 1998

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ATTACHMENT 1

REQUEST FOR LICENSE AMENDMENT  
INCORPORATION OF GENERIC LETTER 90-06 REQUIREMENTS  
SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311

I. Description of Change

This amendment change request proposes that existing Technical Specification 3/4.4.3 for DPR-70 (Unit 1) and 3/4.4.5 for DPR-75 (Unit 2), "RELIEF VALVES", be revised such that:

- With one or both Power Operated Relief Valves (PORVs) inoperable and capable of being manually cycled, continued plant operation shall be permitted only if the associated Block Valve(s) is closed with power maintained. A Bases change has been included to clarify that although a PORV may be inoperable, it may be able to be manually opened or closed, and therefore, able to perform its intended design function. PORV inoperability may be due to seat leakage, instrumentation problems, automatic control problems, or other causes that do not prevent manual use, and do not create a possibility for a small break LOCA. The Action Statement requires that the block valve be closed, and power maintained to the valve.
- With one PORV inoperable and not capable of being manually cycled, continued plant operation shall be permitted only if the associated Block Valve is closed and de-energized within one hour and the affected PORV is returned to operable status within 72 hours.
- With both PORVs inoperable and not capable of being manually cycled, continued plant operation shall be permitted only if at least one PORV can be restored to operable status within 6 hours. The remaining PORV shall be restored to operable status within 72 hours from failure of that valve to meet the Limiting Condition for Operation (LCO).
- With one or both Block Valve(s) inoperable, either the valve(s) shall be restored to operable status or the associated PORVs shall be placed in manual control within one hour. If both Block Valves are inoperable, at least one shall be restored to operable status within the next 6 hours. The remaining Block Valve shall be restored to operable status within 72 hours from failure of that valve to meet the LCO.
- Each PORV shall be demonstrated operable on an 18 month test interval by: 1) operating the valve through one complete cycle of travel during Modes 3 or 4, 2) operating solenoid, control, and check valves associated with the PORV accumulators through one complete cycle of travel, and 3) performing a channel calibration of the actuation instrumentation.

- Each Block Valve shall be demonstrated operable on a 92 day test interval by operating the valve through one complete cycle of travel.

This amendment change request proposes that existing Technical Specification 3.4.9.3 for DPR-70 and 3.4.10.3 for DPR-75, "OVERPRESSURE PROTECTION SYSTEMS", be revised such that:

- With one PORV inoperable in Mode 4 and the temperature of one or more of the RCS cold legs is less than or equal to 312°F, the inoperable PORV shall be restored to operable status within 7 days or the reactor coolant system shall be vented within the next 8 hours.
- With one PORV inoperable in Modes 5 or 6 with the Reactor Vessel Head installed, the inoperable PORV shall be restored to operable status within 24 hours or the reactor coolant system shall be vented within the next 8 hours.
- The reference to the specific ASME valve category is deleted from the surveillance requirements for consistency (applicable to DPR-70 only).

Finally, this amendment change request proposes that existing Technical Specification 3.5.3, "ECCS SUBSYSTEMS - T ave < 350°F", be administratively revised such that:

- The applicability of the note pertaining to the LCO and surveillance 4.5.3.1 is reworded for clarity.

## II. Reason for Proposed Change

PSE&G is submitting this amendment request in fulfillment of the requirements set forth in NRC Generic Letter (GL) 90-06 dated June 25, 1990. GL 90-06 provided the staff's positions on the resolution of Generic Issue 70 (GI-70), "Power-Operated Relief Valve and Block Valve Reliability", and Generic Issue 94 (GI-94), "Additional Low-Temperature Overpressure Protection for Light-Water Reactors".

Following the TMI-2 accident, the NRC initiated an effort to evaluate the role of PORVs in performing certain safety-related functions. Consequently, the NRC determined that over a period of time, the role of PORVs has changed such that PORVs are now relied upon by various plants to perform one, or more, of the following safety-related functions:

1. Mitigation of a design-basis steam generator tube rupture accident,
2. Low-temperature overpressure protection of the reactor vessel during startup and shutdown, and/or,
3. Plant cooldown in compliance with Branch Technical Position RSB 5-1 to SRP 5.4.7, "Residual Heat Removal (RHR) System".

Based on these findings, it was determined that the safety classification of PORVs and block valves should be reconsidered. The NRC subsequently issued a list of actions in GL 90-06 as part of the technical resolution of GI-70 to be taken by PWR plants to increase the reliability of PORVs and block valves and provide assurance that they will function as required in response to a Steam Generator Tube Rupture event. One of the required actions delineated in GL 90-06 is to modify the existing technical specifications for the PORVs and block valves in Modes 1, 2, and 3.

GI-94 arose as a result of continuing low-temperature overpressure events and the unavailability of Low-Temperature Overpressure Protection (LTOP) channels. PORVs are relied upon by most Westinghouse PWRs, Salem included, to provide low-temperature overpressure protection. Based on the NRC evaluation of the LTOP system unavailability, it was concluded that additional restrictions are warranted and that existing technical specifications should be modified for the affected plants.

The technical specification changes encompassed by this amendment request are those that have resulted from the resolutions of GI-70 and GI-94 and which have been delineated and justified by the NRC in GL 90-06. Where differences exist between the modified technical specifications provided in GL 90-06 and those contained in this amendment request, full justification has been provided.

### III. Justification for the Proposed Change

#### Specification 3/4.4.3 (DPR-70, Unit 1) and 3/4.4.5 (DPR-75, Unit 2), "RELIEF VALVES".

The changes that are proposed for specification 3/4.4.3 (DPR-70, Unit 1) and 3/4.4.5 (DPR-75, Unit 2) are in response to the requirements delineated in GL 90-06, Enclosure A, pages A-4, A-5, and A-7 and justified on pages A-8 through A-10. These requirements are based on improving the reliability of PORVs and block valves.

The modified technical specifications contained on pages A-4, A-5, and A-7 of Enclosure A to GL 90-06 have been fully incorporated into this amendment request with the following exceptions:

- . The surveillance requirement to test the emergency power supply for the PORVs and block valves has been deleted.
- . The entry conditions for one or both PORVs inoperable will not be based on excessive seat leakage. Entry conditions will be based on the capability of the PORV to be manually cycled consistent with the Action Statements contained in NUREG-1431, Standard Technical Specifications for Westinghouse Plants.
- . With both PORVs inoperable in Modes 1, 2, or 3 and not capable of being manually cycled or both Block valves are inoperable, an allowed outage time of 6 hours to restore one block valve or PORV to operable status has been requested.

The surveillance requirement to test the emergency power supply for the PORVs and block valves has not been incorporated into this amendment request because these valves receive power from safety-related, diesel-backed busses. The operability of these busses is verified by surveillance requirements pertaining to electrical power systems (Technical Specification 3.8.1.1).

The Action Statements for Technical Specifications 3/4.4.3 and 3/4.4.5 for Salem Units 1 and 2, respectfully have been changed to delete entry conditions associated with excessive PORV seat leakage. The entry conditions are now based upon the capability of the PORV to be manually cycled consistent with the Action Statements contained in NUREG-1431. Although a PORV may be inoperable, it may be able to be manually opened or closed, and therefore, able to perform its intended design function. PORV inoperability may be due to seat leakage, instrumentation problems, automatic control problems, or other causes that do not prevent manual use, and do not create a possibility for a small break LOCA. The Action Statement requires that the block valve be closed, and power maintained to the valve.

The Generic Letter 90-06 requirement to restore a Block valve or PORV to operable status within 1 hour if both PORVs are determined to be inoperable and not capable of being manually cycled or both block valves are inoperable has not been incorporated. An Allowed Outage Time (AOT) of 6 hours has been requested for these Limiting Conditions for Operation. The basis



for the increase for these AOTs from 1 hour to 6 hours is to enable sufficient time for containment entry to assess and implement, if possible, minor corrective actions to return inoperable PORV(s) or block valves to operable status. The additional time requested would allow the correction of minor deficiencies, and therefore allow the plant to continue to operate without bringing the plant through a shutdown transient. Plant shutdown under these action statements would result in the entry to a lower mode of operation which requires the PORVs to be operable to provide a Low Temperature Overpressure Protection (LTOP) function.

Specification 3.4.9.3 (DPR-70, Unit 1) and 3.4.10.3 (DPR-75, Unit 2), "OVERPRESSURE PROTECTION SYSTEMS".

The changes that are proposed for specifications 3.4.9.3 (DPR-70, Unit 1) and 3.4.10.3 (DPR-75, Unit 2) are in response to the requirements delineated in GL 90-06, Enclosure B, pages B-6 and B-7 and justified on pages B-8 and B-9. These requirements seek to instill improved administrative restrictions on the Low Temperature Overpressure Protection (LTOP) System thereby improving availability when the potential for an overpressure event is the highest and especially during water-solid conditions.

Salem Units 1 and 2 currently have technical specifications pertaining to PORVs used for LTOP; therefore, the only changes that have been proposed for these sections are to restrict the applicability of Action a to Mode 4 and the temperature of one or more of the RCS cold legs is less than or equal to 312°F, and to incorporate Action b from the modified technical specifications delineated in GL 90-06, Enclosure B, pages B-6 and B-7. This is in compliance with the instructions given on page B-8 of the GL.

One additional administrative change has been proposed for the Unit 1 technical specification. The reference to the specific ASME valve category has been deleted from surveillance requirement 4.4.9.3.1 (DPR-70). This type of information is contained in the In-Service Test Program and is not normally included in technical specifications.

Specification 3.5.3, "ECCS SUBSYSTEMS - T ave < 350°F".

Changes are proposed for specification 3.5.3 in order to more clearly specify the applicability of Surveillance 4.5.3.1. and the note pertaining to the LCO. The surveillance and note apply when: 1) the plant is in Mode 4 and any RCS cold leg temperature

is less than or equal to 312°F (plant specific value), 2) Mode 5, and 3) Mode 6 when the head is on the reactor vessel.

As these changes do not delineate any new or differing guidance and are proposed for clarity only, they are considered administrative in nature.

#### IV. Significant Hazards Consideration

PSE&G has, pursuant to 10 CFR 50.92, reviewed the proposed amendment to determine whether our request involves a significant hazards consideration. We have determined that operation of Salem Units 1 and 2 in accordance with the proposed change:

1. Will not involve a significant increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated. This change will instill administrative restrictions on the Low Temperature Overpressure Protection System and the PORVs thereby improving reliability and availability to respond to a Steam Generator Tube Rupture and overpressure transient. The proposed amendment requires that power be maintained to block valves that are closed should a PORV be inoperable, but still capable of being manually cycled. This change ensures that the block valves can be opened on demand from the control room. Power is maintained to the block valves so that it is operable and may be subsequently opened to allow the PORV to be used to control reactor pressure. The capability to manually cycle the PORV is consistent with the Action Statement contained in NUREG-1431. This change actually improves overall plant safety. Therefore, the proposed amendment does not involve a procedural or physical change to any structure, system or component that significantly affects accident/malfunction probabilities or consequences previously evaluated in the UFSAR.
2. Will not create the possibility of a new or different kind of accident from any previously evaluated. The proposed amendment does not involve any physical changes to plant structures, components, or systems. With the exception of maintaining power to a block valve closed to isolate a PORV that is inoperable but capable of being manually cycled, which does not create the possibility of a new or different kind of accident, the proposed change will not impose any different requirements on plant operation. Therefore, the proposed changes do not create the possibility of a new or different accident from any previously evaluated.

3. Will not involve a significant reduction in a margin of safety. The proposed changes actually increase the overall margin of safety by improving the availability and reliability of the PORVs and Block valves in response to Steam Generator Tube Rupture events, and the PORVs in response to overpressure transients.

V. Conclusions

Based on the above discussions and those presented in the Justification Section, it has been determined that the proposed Technical Specification revisions do not involve a significant increase in the probability or consequences of an accident over previous evaluations, create the possibility of a new or different kind of accident, or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.

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ATTACHMENT 2

REQUEST FOR LICENSE AMENDMENT  
INCORPORATION OF GENERIC LETTER 90-06 REQUIREMENTS  
SALEM GENERATING STATION UNITS 1 AND 2  
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75  
DOCKET NOS. 50-272 AND 50-311

TECHNICAL SPECIFICATION PAGES WITH PEN AND INK CHANGES

The following Technical Specifications are affected by this requested amendment:

Facility Operating License No. DPR-70 (Unit 1)

<u>Technical Specification</u>	<u>Page</u>
3/4.4.3	3/4 4-5
3.4.9.3	3/4 4-30
	3/4 4-31
3.5.3	3/4 5-6
	3/4 5-6a
B3/4.4.3	B3/4 4-1a

Facility Operating License No. DPR-75 (Unit 2)

<u>Technical Specification</u>	<u>Page</u>
3/4.4.5	3/4 4-8
3.4.10.3	3/4 4-31
3.5.3	3/4 5-7
	3/4 5-8
B3/4.4.5	B3/4 4-2