

Public Service
Electric and Gas
Company

Steven E. Miltenberger
Vice President and Chief Nuclear Officer

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-4199

March 16, 1989
NLR-N89004

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

Gentlemen:

REQUEST FOR AMENDMENT
FACILITY OPERATING LICENSE DPR-70 AND DPR-75
SALEM GENERATING STATION - UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

In accordance with the Atomic Energy Act of 1954, as amended, and the regulations thereunder, Public Service Electric and Gas Company (PSE&G) hereby transmits revised pages to a request for amendment (LCR 87-03) of Facility Operating Licenses DPR-70 and DPR-75 for Salem Generating Station (SGS), Unit Nos. 1 and 2, respectively. Pursuant to the requirements of 10CFR50.91(b)(1), a copy of this request has been sent to the State of New Jersey as indicated below.

These revisions are being submitted based on conversations between PSE&G and the NRC Licensing Project Manager on December 14, 1988. The revisions are intended to more properly reflect the operation of the ECCS subsystems. The changes provide clarity and ensure the ECCS subsystems are aligned as assumed in the ECCS Loss of Coolant Design Basis Accident. For your convenience, both the revised Technical Specification pages and the justification are provided in Enclosure 1. The Justification Section also addresses removal of an expired action statement extension. Since the revisions are either editorial or clarify the method of operation and do not technically affect the previously submitted pages, the attached No Significant Hazards Consideration remains unchanged and is still bounding.

Should you have any questions on the subject transmittal, please do not hesitate to contact us.

Sincerely,



Enclosures (3)

8903300039 890316
PDR ADDCK 05000272
PNU

A001
11

Document Control Desk
NLR-N89004

2

03-16-89

C Mr. J. C. Stone
Licensing Project Manager

Ms. K. Halvey Gibson
Senior Resident Inspector

Mr. W. T. Russell, Administrator
Region I

Ms. J. Moon, Interim Chief
New Jersey Department of Environmental Protection
Division of Environmental Quality
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

S. E. Miltenberger, being duly sworn according to law deposes and says:

I am Vice President and Chief Nuclear Officer of Public Service Electric and Gas Company, and as such, I find the matters set forth in our letter dated March 16, 1989, concerning the Salem Generating Station, Unit Nos. 1 and 2, are true to the best of my knowledge, information and belief.

Steven E. Miltenberger

Subscribed and Sworn to before me
this 16th day of March, 1989

Eileen M. Ochs

Notary Public of New Jersey

EILEEN M. OCHS
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires July 16, 1992

My Commission expires on _____

ENCLOSURE 1

PROPOSED CHANGE TO TECHNICAL SPECIFICATIONS
SALEM GENERATING STATION, UNIT NOS. 1 AND 2
FACILITY OPERATING LICENSES DPR-70 AND DPR-75
DOCKET NOS. 50-272 AND 50-311

LCR 87-03
Rev. 1
NLR-N89004

This amendment request proposes to modify the following Technical Specification sections:

1. Technical Specification 3.5.2. This section contains the Limiting Condition for Operation (LCO) for the Emergency Core Cooling System (ECCS) subsystems when $T_{avg} \geq 350^{\circ}F$.
2. Technical Specification 4.5.2. This section presents the Surveillance Requirements for ECCS subsystems when $T_{avg} \geq 350^{\circ}F$.
3. Technical Specification 3.5.3. This section contains the LCO for ECCS subsystems when $T_{avg} < 350^{\circ}F$.
4. Technical Specification Bases Section 3/4.5.2 and 3/4.5.3. These sections provide the bases for the contents of Technical Specifications 3/4.5.2 and 3/4.5.3.

The following four sections contain a description, justification, and Significant Hazards Consideration Evaluation for each of the four Technical Specification (TS) sections being modified.

1. Technical Specification 3.5.2 (Salem Unit 1 and 2 - TS page 3/4 5-3).

Description of Change

This section is being modified to explicitly identify the flow paths into the RCS which are required to be OPERABLE. The suction and discharge flow paths have been grouped with their associated ECCS component. These components, or injection systems, together compromise one ECCS subsystem.

Also, an Action Statement is being added that reads as follows: "With both ECCS subsystems inoperable for Surveillance Testing, restore at least one subsystem to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours, in at least HOT SHUTDOWN within the following 6 hours, and at least COLD SHUTDOWN within the subsequent 24 hours." Additionally, the footnote regarding the No. 22 charging pump repairs is being deleted since the applicability expired on November 12, 1981.

Justification for Change

The first change does not modify the ECCS injection or recirculation mode flow paths in any way. It's purpose is to ensure that the ECCS subsystems are aligned as assumed in the design bases for the ECCS-LOCA (Loss of Coolant Accident). This

clarification is being made in response to the Residual Heat Removal (RHR) valve misalignment concern which was identified for Salem Unit 2 on January 13, 1987. On that date, IE Notice 87-01 entitled "RHR valve Misalignment Causes Degradation of ECCS in PWRs" was received and reviewed by station personnel. The review identified a potential violation of the ECCS-LOCA design bases in that valves associated with the Residual Heat Removal (RHR) injection path into two Reactor Coolant system (RCS) cold legs were tagged out for preventive maintenance.

The second change adds an Action Statement that allows both ECCS subsystems to be inoperable for up to one hour for surveillance testing. Certain valves identified in Technical Specification Surveillance 4.5.2 as being maintained open are also part of the Inservice Testing (IST) program. As such, they must be stroke tested periodically. Some of these periodicities are at least quarterly, which means some stroke testing occurs while the units are at full power. In a few instances, the valve to be tested is common to both ECCS subsystems. A list of these valves is provided in the Unit 1 and 2 Technical Specifications, Section 4.5.2 as being required to be locked in its proper position. This was previously reviewed and approved in the original Staff SER, Section 7.3.6, issued October 11, 1974. Additionally, in order to test the CS 16 and 17 valves (containment spray additive tank valves) which are not on the Technical Specification list, it is necessary to close the CS 14 valves, which are listed as isolating both trains of ECCS. In either case, testing of the valves results in both trains of the ECCS subsystem being technically inoperable for the duration of the test. The testing is a controlled evolution of limited duration (< 1 hour). Additionally, the test is reversible on short notice. Upon receipt of demand for an ECCS subsystem which is being tested, the operator can properly align the valves and restore ECCS capability. Thus the probability of having an ECCS subsystem inoperable in the event of demand is highly unlikely. This situation, which was identified as a result of IE Notice 87-01, was discussed with NRC staff members in a telecon held January 29, 1987. During this telecon, it was agreed to continue to stroke test the subject valves at the normal intervals by entering Action Statement 3.0.3. This Action Statement allows the LCO to be exceeded for up to one hour. Shutdown must commence if this time limit is exceeded. However, a License Event Report (LER) is required pursuant to 10CFR50.73(a)(2)(i)(b) each time Action Statement 3.0.3 is entered. This change allows IST stroke testing to be conducted under the proposed action statement as opposed to Action Statement 3.0.3, thereby negating the reportability requirements of 10CFR50.73. The proposed statement does not change the time limits associated with Action Statement 3.0.3. The third change eliminates an action extension that is no longer applicable in that the extension expired on November 12, 1981.

Significant Hazards Consideration Evaluation

The proposed changes to Technical Specification 3.5.2 do not involve a significant hazards consideration because operation of Salem Unit 1 and 2 in accordance with these changes would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The first change is being made for clarification only. It's purpose is to clearly reflect ECCS-LOCA design bases requirements in the Technical Specifications. No physical change to plant systems is involved, nor is there an impact on the licensing bases of the units. Therefore, this change cannot increase the probability or consequences of an accident. The second change allows IST stroke testing of valves listed in Surveillance 4.5.2 to continue without submittal of an LER. The IST stroke testing intervals remain unchanged, as do the Action Statement time limits. The third change is purely administrative in that it removes a condition that is no longer applicable. Therefore, these changes cannot increase the probability or consequences of an accident.
- (2) Create the possibility of a new or different kind of accident from any previously analyzed. The first change only serves to emphasize ECCS-LOCA requirements for injection flow paths into the RCS. These requirements are not new as they are already part of the design and licensing bases of the Salem units. The second change makes no changes to the Action Statement time limits associated with IST surveillances conducted on valves listed in Technical Specification Surveillance 4.5.2. It only serves to address reporting requirements. The third change does not affect the current operation of the plant since it removes irrelevant information. Therefore, these changes do not create the possibility of a new or different kind of accident.
- (3) Involve a significant reduction in a margin of safety. The first change serves to maintain the current margin of safety associated with the LOCA accident analysis and ensure that the ECCS subsystems are aligned as assumed in the design bases for the ECCS-LOCA. The second change maintains the Action Statement time limitations associated with IST stroke testing. The third change removes irrelevant information that is no longer applicable. Therefore, these changes make no reduction in a margin of safety.

2. Technical Specification 4.5.2 (Salem Unit 1 and 2 - TS page 3/4 5-4).

Description of Change

The first change adds a requirement to verify the RH19 valves open once per 12 hours. The second change adds to the Salem Unit 1 Technical Specifications a requirement to vent ECCS pump casings and accessible discharge piping high points once per 31 days. The third change adds a footnote to the CS 14 valves listed under Section a. in both Salem Units 1 and 2 Technical Specifications. The footnote reads "If inoperable, the applicable Technical Specification is 3.6.2.2."

Justification for Change

The first change helps ensure that the design basis for the ECCS-LOCA is maintained. The RH19 valves must be open in order for an RHR pump to be capable of injecting into each RCS cold leg. Therefore, the requirement to verify these valves open once per 12 hours is being added.

The second change, which adds the requirement to verify that the ECCS piping is full of water by venting, already appears in the corresponding Salem Unit 2 Surveillance Requirement. This requirement is being added to the Unit 1 Surveillance Requirement section in an effort to make the Salem Unit 1 and 2 Technical Specifications the same, where possible.

The third change clarifies that with the CS 14 valve inoperable, the affected system is the Containment Spray System (Spray Additive Tank). Presently, the Containment Spray System is not addressed in the Limiting Condition for Operation (LCO) for Technical Specification 3.5.2. Technical Specification 3.6.2.2 specifically addresses the inoperability of the Spray Additive Tank. Consequently, when the Spray Additive Tank discharge valve (CS 14) is inoperable, the Action Requirements of Technical Specification 3.6.2.2 should be followed. The reason for listing the CS 14 valve in Technical Specification Surveillance 4.5.2 is to maintain all the power lock-out valves in the same surveillance. Presently, Technical Specification 3.6.2.2 is administratively restricted such that with the Spray Additive Tank inoperable, Technical Specification 3.0.3 is entered, which limits the time to return the Spray Additive Tank to operable status to one hour. This time limit is consistent with the action requirements of Technical Specification 3.5.2.

Significant Hazards Consideration Evaluation

The proposed changes to Technical Specification 4.5.2 do not involve a significant hazards consideration because operation of Salem Unit 1 and 2 in accordance with these changes would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The first change, which adds the RH19 valves to the surveillance, constitutes an additional means of control. As such, it does not involve a significant increase in the probability or consequences of an accident. This change corresponds to Example II.2 of 48FR14870 as a means of additional control on the plant. The second change adds a surveillance requirement to the Unit 1 Technical Specifications that is already contained in the Salem Unit 2 Technical Specifications. Again, this change corresponds to example II.2 as an additional means of control on plant operation, and will not increase the probability or consequences of an accident.

The third change directs the operator from Technical Specification 3.5.2 to 3.6.2.2 if the CS 14 valve is inoperable. Since the time limitation of the Action Requirement remains administratively controlled at one hour, there is no increase in the probability or consequences of an accident previously evaluated.

- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated. The first two changes add additional control on plant operation. They do not impact the licensing bases. No new accident can be postulated as a result of these changes. The third change does not change the Action Requirement time limitation associated with the CS 14 valve. Therefore, no new or different kind of accident can be postulated as a result of this change.
- (3) Involve a significant reduction in a margin of safety. These changes add or maintain current surveillance requirements. They do not reduce any margin of safety; instead, they serve to maintain the respective Technical Specification margins of safety.

3. Technical Specification 3.5.3 (Salem Unit 1 - TS page 3/4 5-6 and Salem Unit 2 - TS page 3/4 5-7).

Description of Change

Technical Specification 3.5.3 in both Salem Units is being modified to explicitly identify the required OPERABLE flow paths into the RCS for each ECCS subsystem in Mode 4. The suction and discharge paths have been grouped with their associated ECCS component. Secondly, the # footnote associated with Section 3.5.3 that appears at the bottom of the page in both the units Technical Specifications is being modified by adding the phrase "or one centrifugal charging pump". Third, the following note

already appears in the Salem Unit 2 Technical Specifications at the bottom of the referenced page; "Note: This particular restriction also applies in Modes 5 and 6." This note is being added to Salem Unit 1 Technical Specification 3.5.3 to achieve consistency between the two documents.

Justification for Change

The first change makes the Technical Specifications clearly reflect the design bases for the ECCS-LOCA. This will ensure that the required Mode 4 ECCS flow paths are maintained OPERABLE, and thus will preclude an ECCS misalignment from occurring in Mode 4. This first change does not modify the ECCS injection or recirculation flow paths in any way.

The second change is for clarification only. The Safety Injection (SI) pumps are de-energized whenever the RCS temperature is below 312°F except when a special surveillance test is being conducted and then only one SI pump is energized. This restriction allows the Pressurizer Overpressure Protection System (POPS) to maintain the RCS pressure below the 10 CFR 50, Appendix G limit in case of inadvertent mass addition from the single SI pump. The current footnote incorporates this requirement by stating that only one SI pump shall be OPERABLE when the RCS temperature is less than or equal to 312°F. Implicit in this statement is the requirement that the centrifugal charging pump be disabled and therefore not OPERABLE. This change makes this requirement explicitly clear by stating that one SI or one centrifugal pump, not one SI pump in addition to one centrifugal charging pump, shall be OPERABLE when the RCS temperature is less than or equal to 312°F.

The third change adds a note that already appears in the Salem Unit 2 Technical Specifications to the Unit 1 Technical Specifications. This note is being added in an effort to make the Salem Unit 1 and 2 Technical Specifications identical, where possible.

Significant Hazards Consideration Evaluation

The proposed changes to Technical Specification 3.5.3 do not involve a significant hazards consideration because operation of Salem Units 1 and 2 in accordance with these change would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The first change is being made for clarification only in order to clearly reflect the design bases ECCS-LOCA requirements in the Technical Specifications. No physical change or procedural changes are involved, nor is there an impact on the licensing bases of the units. In fact, this change helps to ensure adherence to the licensing bases of the units. Since this first change

consists of a rewording modification only, it corresponds to Example II.1 of 48FR14870 as a purely administrative change. The second change is also being made for clarification only in order to ensure that correct maximum number of ECCS injection pumps are maintained OPERABLE when the RCS temperature is less than or equal to 312°F. This change also corresponds to Example II.1 of 48FR14870. The third change, which adds a note that appears in the Unit 2 Technical Specifications to the Unit 1 Technical Specifications, makes the two documents consistent. The note states that the restriction on the number of OPERABLE ECCS injection pumps is also applicable in Modes 5 and 6. Adding this note clarifies the fact that the limit on the number of ECCS injection pumps is also applicable in Modes 5 and 6 for Salem Unit 1. This change corresponds to Example II.2 of 48FR14870. None of these changes increase the probability or consequences or an accident previously evaluated.

- (2) Create the possibility of a new or different kind of accident from any previously evaluated. These changes are for clarification only and present in clearer detail the current requirements associated with the ECCS flow paths and ECCS injection pumps. Since these changes do not delete or alter any existing requirements, they cannot create the possibility of a new or different kind of accident than previously evaluated.
- (3) Involve a significant reduction in the margin of safety. These changes clarify existing requirements only and their purpose is to maintain the Technical Specification margins of safety. Hence, they do not reduce any margin of safety.

- 4. Technical Specification Bases Section 3/4.5.2 and 3/4.5.3 (Salem Unit 1 - TS page B3/4 5-1a and Salem Unit 2 TS page B3/4 5-2).

Description of Change

The following sentence has been added to the end of the last paragraph of Bases Sections 3/4.5.2 and 3/4.5.3 for both Salem units; "Each ECCS subsystem supplies all four cold legs to satisfy minimum flow requirements."

Also, the phrase "or one centrifugal charging pump" has been added to the first sentence of the second paragraph of page B 3/4 5-2 of the Salem Unit 2 Technical Specifications.

Justification for Change

The first change serves to reiterate the requirement to maintain the capability to supply all four RCS cold legs. The second change reflects the phrase being added to the # footnote of Technical Specification 3.5.3. This footnote addresses the operability requirements for the safety injection and charging pumps in Modes 4, 5 and 6.

Significant Hazards Consideration Evaluation

The proposed changes to Technical Specification Bases Sections 3/4.5.2 and 3/4.5.3 do not involve a significant hazards consideration because operation of Salem Unit 1 and 2 in accordance with these changes would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated. The first change is for clarification only and serves to highlight the ECCS-LOCA requirement to maintain the capability to supply all four RCS cold legs. The second change again only clarifies in the Bases Section existing requirements that serve to maintain the RCS pressure below the 10CFR50, Appendix G limits in case of an inadvertent mass addition.
- (2) Create the possibility of a new or different kind of accident from any previously analyzed. The first change does not involve any hardware or procedure modifications and only serves to identify an existing design bases for the ECCS-LOCA. Likewise, the second change clarifies in the Bases Section existing requirements. No new or different kind of accident can be postulated as a result of these changes.
- (3) Involve a significant reduction in a margin of safety. These changes serve to identify existing design bases for the ECCS-LOCA and RCS pressure limits in Mode 4. They do not impact any margin of safety.

Conclusion

Based on a review of the requested changes against the criteria of 50.92, PSE&G has concluded that the changes do not involve a Significant Hazards Consideration.