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10 CFR 50.90

LR-N15-0182
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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Salem Nuclear Generating Station Units 1 and 2
Renewed Facility Operating License Nos. DPR-70 and DPR-75
NRC Docket Nos. 50-272 and 50-311

Subject: **License Amendment Request to Correct a Non-Conservative
Technical Specification Applicability Statement and Inconsistent
Action Statements**

In accordance with 10 CFR 50.90, PSEG Nuclear LLC (PSEG) hereby requests an amendment to Renewed Facility Operating License Nos. DPR-70 and DPR-75 for Salem Nuclear Generating Station Units 1 and 2. In accordance with 10 CFR 50.91(b)(1), a copy of this request for amendment has been sent to the State of New Jersey.

The proposed changes correct a discrepancy in Technical Specification (TS) 3.6.2.3 for the Containment Cooling System between the TS mode applicability (modes 1, 2 and 3) and the shutdown mode in the associated action statement (Cold Shutdown (mode 5)). In accordance with NRC Administrative Letter 98-10, PSEG has implemented administrative controls that will require the affected Salem unit to apply TS 3.6.2.3 to mode 4 in addition to the current TS mode Requirements of mode 1 through 3. These controls will remain in place until this amendment request is approved and implemented.

In addition, the proposed changes correct discrepancies between TS mode applicability and action statement shutdown modes in TS 3.7.1.1, Safety Valves.

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The proposed change has been evaluated in accordance with 10 CFR 50.91(a)(1), using the criteria in 10 CFR 50.92(c), and it has been determined that this request involves no significant hazards considerations.

There are no regulatory commitments contained in this letter.

Attachment 1 to this letter provides an evaluation supporting the proposed changes. The marked-up TS pages, with the proposed changes indicated, are provided in Attachment 2 to this letter.

These proposed changes have been reviewed by the Plant Operations Review Committee.

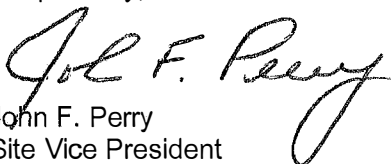
PSEG requests NRC approval of the proposed License Amendment within one year of submittal to be implemented within 60 days of issuance.

If you have any questions or require additional information, please contact Mr. Lee Marabella at (856) 339-1208.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on 10-12-2015
(Date)

Respectfully,


John F. Perry
Site Vice President
Salem Generating Station

Attachments:

1. Request for Changes to Technical Specifications
2. Technical Specification Pages with Proposed Changes

cc: Administrator, Region I, NRC
Project Manager, NRC
NRC Senior Resident Inspector, Salem
Mr. P. Mulligan, Chief, NJBNE
Mr. L. Marabella, Corporate Commitment Tracking Coordinator
Mr. T. Cachaza, Salem Commitment Tracking Coordinator

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Attachment 1

Request for Changes to Technical Specifications

SALEM GENERATING STATION
RENEWED FACILITY OPERATING LICENSE NOS. DPR-70 AND
DPR-75
DOCKET NO. 50-272 AND 50-311

**License Amendment Request to Correct a Non-Conservative Technical Specification
Applicability Statement and Inconsistent Action Statements**

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1.0 DESCRIPTION

This license amendment request proposes a change which would revise the applicability statement for Salem Units 1 and 2 Technical Specification (TS) 3.6.2.3, Containment Cooling System, to correct a discrepancy between the TS mode applicability and the shutdown mode in the associated action statements.

The request also proposes changes to action statements in the Unit 1 and Unit 2 TS 3.7.1.1, Safety Valves, to correct discrepancies between TS mode applicability and action statement shutdown modes.

2.0 PROPOSED CHANGE

The proposed TS changes (Unit 1 and 2 changes are identical) are described below and are indicated on the marked up TS pages provided in Attachment 2 of this submittal.

1. The APPLICABILITY for TS 3.6.2.3 is being revised as shown below:

MODES 1, 2, ~~and 3~~ and 4

This change will correct the non-conservative applicability mode statement to align it with the modes specified in the action statements.

2. The action statements for TS 3.7.1.1 are being revised as shown below:

- a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and be in ~~COLD~~ HOT SHUTDOWN within the next ~~30~~ 12 hours.
- b. With three main steam line code safety valves inoperable in one or more steam generators, operation in modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD~~ HOT SHUTDOWN within the next ~~30~~ 12 hours.

This change will revise the action statements to require achievement of HOT SHUTDOWN within 12 hours thus properly aligning it with the mode applicability of modes 1, 2 and 3 and aligning the completion time to conform to the same requirement as provided in NUREG-1431.

3.0 BACKGROUND

TS 3.6.2.3:

The LIMITING CONDITION FOR OPERATION (LCO) for TS 3.6.2.3 requires five containment cooling fans to be OPERABLE to ensure that adequate heat removal capacity is available when operated in conjunction with the containment spray systems during post-Loss of Coolant Accident (LOCA) conditions. The applicability modes for this TS are inconsistent with all other primary containment LCOs in the Salem TS. In addition, a review of the current NUREG-1431 Standard Technical Specifications (STS) shows that in modes 1, 2, 3 and 4, a Design Basis Accident LOCA could cause a release of radioactive material to containment and an increase in containment pressure and temperature requiring the operation of the containment cooling trains. In modes 5 and 6 the probability and consequences of these events are reduced due to the pressure and temperature limitations of these modes. Thus, the Containment Cooling System is required to be OPERABLE in modes 1, 2, 3 and 4 and not required to be OPERABLE in modes 5 and 6.

The TS action statements require restoration of containment cooling fans found to be inoperable within 7 days or be in HOT STANDBY (mode 3) within the next 6 hours and in COLD SHUTDOWN (mode 5) within the next 30 hours. This is consistent with action statements driving the plant down to the next lower mode below the mode applicability to place the plant in a mode where the TS are not applicable.

Contrary to the applicability requirements stated above, TS 3.6.2.3 was found to state an applicability of modes 1, 2, and 3 which implies that the LCO of five containment cooling fans OPERABLE does not apply in mode 4, which as shown above is incorrect. This situation is considered non-conservative because it allows potential operation in mode 4 with less than the required number of containment cooling fans in operation.

As a result of this determination, PSEG took the following actions:

- Implemented administrative controls that will require the affected Salem unit to apply TS 3.6.2.3 to mode 4 in addition to the current TS mode requirements of mode 1 through 3.
- Performed a review of other Salem Unit 1 and Unit 2 TS to determine if there were additional instances of discrepancies between TS mode applicability and action statement shutdown modes.
- Initiated this License Amendment Request.

The review determined that TS 3.7.1.1 for both Unit 1 and Unit 2 were found to have discrepancies.

TS 3.7.1.1:

The LCO for TS 3.7.1.1 requires all main steam line code safety valves (MSSVs) associated with each steam generator to be OPERABLE in support of secondary system integrity by limiting pressure to 110% of design value during the most severe anticipated system operational transient while in modes 1, 2 and 3. These applicability modes are consistent with TS 3/4.7.1 bases and the action statement which specifies modes 1, 2 and 3.

The TS action statements for TS 3.7.1.1 require restoration of inoperable MSSVs to OPERABLE status within 4 hours or reduction in power less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1, otherwise be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. The action statements are inconsistent with the practice of driving the plant down to the next lower mode below the mode applicability to place the plant in a mode where the TS is not applicable. To be consistent the TS actions should drive the plant to HOT SHUTDOWN.

The conflict in mode applicability and action statement modes does not impact the ability to comply with the action statement. Once the action is taken to go from HOT STANDBY to COLD SHUTDOWN the plant is no longer in a mode of applicability and can exit the LCO. The conflict in TS mode applicability and the TS actions has existed since the original issuance of the Salem TS. The Salem TS were based on STS NUREG-0452. A review of NUREG-0452 identified that the conflict in TS mode applicability and TS action existed in the STS NUREG as well. During the conversion of the STS NUREG-0452 to the Improved STS NUREG-1431, the inconsistency in TS 3.7.1 was corrected. The TS actions were revised to stop the mode descension in mode 4 (HOT SHUTDOWN) instead of mode 5 (COLD SHUTDOWN). Based on the above, the conflict in mode applicability and TS action is not a non-conservative TS.

4.0 TECHNICAL ANALYSIS

- 4.1 The proposed changes to the TS 3.6.2.3 Applicability correct non-conservative inconsistencies between the applicability modes and the modes stated in action statements a. and b. which were introduced with implementation of TS Amendment 35 for Unit 1 and with the original issue of Unit 2 TS. This proposed change will make the applicability consistent with all other Salem containment TS. In addition, a review of NUREG-1431 Standard Technical Specifications (STS) and associated Bases confirmed that the Containment Cooling System is required to be operable in HOT SHUTDOWN (mode 4) to remove heat introduced as a result of a Design Bases Accident (DBA) and therefore showed that the correct mode applicability should be modes 1 through 4.
- 4.2 The proposed changes to TS 3.7.1.1 action statements a. and b. correct inconsistencies between the applicable modes and the modes stated in the action statements which were introduced with the original issue of the Salem TS. As noted in the applicable TS Bases in STS NUREG-1431, in modes 1, 2, and 3, Main Steam Safety Valves (MSSVs) are required to be OPERABLE to prevent Main Steam System overpressurization. In mode 4 (HOT SHUTDOWN) and mode 5 (COLD SHUTDOWN), there are no credible transients requiring the MSSVs. The steam generators are not normally used for heat removal in modes 5 and 6 (REFUELING), and thus cannot be overpressurized; there is no requirement for the MSSVs to be OPERABLE in these modes. This action statement change is consistent with STS NUREG-1431. The action statement is also being changed to reflect achieving HOT SHUTDOWN within 12 hours versus the 30 hours specified for COLD SHUTDOWN. This will maintain consistency with other action statements which specify achieving HOT SHUTDOWN and will be consistent with the guidance of NUREG-1431.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

In accordance with 10 CFR 50.90, PSEG Nuclear LLC (PSEG) hereby requests an amendment to Renewed Facility Operating License Nos. DPR-70 and DPR-75 for Salem Nuclear Generating Station Units 1 and 2.

The license amendment request proposes a change which would revise the applicability statement for Units 1 and 2 Technical Specifications (TS) 3.6.2.3, Containment Cooling System, to correct a discrepancy between the TS mode applicability and the shutdown mode in the associated action statements.

The request also proposes changes to actions statements in the Unit 1 and Unit 2 TS 3.7.1.1 Safety Valves to correct discrepancies between TS mode applicability and action statement shutdown modes.

PSEG has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

Neither the Containment Fan Cooling Units (CFCUs) nor the MSSVs are accident initiators. These proposed changes will not increase the probability of occurrence of any design basis accident since the corrections to the affected Technical Specifications, in and of themselves, cannot initiate an accident. Should a previously evaluated accident occur, the proposed changes will ensure that the plant equipment is operable in all required applicable modes of operation and that the Technical Specification action statements are consistent with those applicable modes. There will be no impact on the source term or pathways assumed in accidents previously evaluated. No design functions of structures, systems and components required to mitigate the consequences of an accident are affected. Therefore, the consequences of an accident previously evaluated are not significantly increased.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not involve physical changes (installing new equipment or modifying existing equipment) related to the design functions or operations of the CFCUs or MSSVs. In addition, the proposed changes to the affected Technical Specification applicability

modes and action statement modes will not create the potential for any new initiating events or transients to occur in the physical plant.

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

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed changes, which correct a non-conservative TS and eliminate an inconsistency between applicability mode and action statement, do not exceed or alter a setpoint, design basis or safety limit. Therefore, the proposed amendment does not involve a significant reduction in a margin of safety.

Based upon the above, PSEG Nuclear concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92 (c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements and Criteria

10 CFR 50.36 Technical Specifications

10 CFR 50.36, "Technical specifications" identifies the requirements for the Technical Specification categories for operating power plants: (1) *Safety limits, limiting safety system settings, and limiting control settings*, (2) *Limiting conditions for operation*, (3) *Surveillance requirements*, (4) *Design features*, (5) *Administrative controls*, (6) *Decommissioning* and (7) *Initial notification*, and (8) *Written Reports*. For limiting conditions for operation, 10 CFR 50.36(c)(2)(i) states: *Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met.*

The proposed changes ensure consistency between the specified modes during which the LCO is required to be met and the actions required to be taken when the LCO is not met.

10 CFR 50 Appendix A General Design Criteria (GDC)

Salem Generating Station was designed using the Atomic Industrial Forum (AIF) general design criteria as published in a letter to the Atomic Energy Commission (AEC) from E. A. Wiggin, Atomic Industrial Forum, dated October 2, 1967. In addition to the AIF General Design Criteria, the Salem Generating Station (SGS) was designed to comply with Public Service Electric & Gas (PSE&G's) understanding of the intent of the AEC's proposed General Design Criteria, as published for comment by the AEC in July, 1967. A comparison of the Salem plant design with 10CFR50, Appendix A, (General Design Criteria for Nuclear Power Plants dated July 7, 1971) was performed and documented in Salem UFSAR Section 3.1.3. Salem UFSAR Section 3.1.3 states, "The Salem Plant design conforms with the intent of "General Design Criteria for Nuclear Power Plants," (10 CFR 50, Appendix A) dated July 7, 1971..."

The proposed changes correct errors in the current Salem Units 1 and 2 TSs and do not affect the intent of any TS requirements. The proposed changes do not alter conformance with either the 10 CFR 50, Appendix A, general design criteria, or the AIF general design criteria as listed in the Salem UFSAR Section 3.1.2.

In conclusion, based on the considerations discussed above, (1) there is a reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the NRC's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCES

1. Salem Technical Specifications.
2. Improved Standard Technical Specifications, Westinghouse Plants, NUREG-1431 Volume 1 Specifications, Revision 4.0.
3. Standard Technical Specifications, Westinghouse Plants, NUREG-0452, Revisions 0 through 4.
4. Amendment No. 35 to Facility Operating License No. DPR-70 for the Salem Nuclear Generating Station, Unit No. 1, April 22, 1981.
5. NRC Administrative Letter 98-10, Disposition of Technical Specifications That Are Insufficient to Assure Plant Safety, December 29, 1998.

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Attachment 2

Technical Specification Pages with Proposed Changes

TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Renewed Facility Operating License DPR-70 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.6.2.3	3/4 6-11
3.7.1.1	3/4 7-1

The following Technical Specifications for Renewed Facility Operating License DPR-75 are affected by this change request:

<u>Technical Specification</u>	<u>Page</u>
3.6.2.3	3/4 6-12
3.7.1.1	3/4 7-1

CONTAINMENT SYSTEMS

CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Five containment cooling fans shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3 and 4
ADD

ACTION:

- a. With one or two of the above required containment cooling fans inoperable, restore the inoperable cooling fan(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With three or more of the above required containment cooling fans inoperable, restore at least three cooling fans to OPERABLE status within 1 hour or be in at least HOT STANDBY WITHIN the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the remaining inoperable cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each containment cooling fan shall be demonstrated OPERABLE:

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves (MSSVs) associated with each steam generator shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD~~ SHUTDOWN within the following ~~20~~ hours. HOT 12 |
- b. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD~~ SHUTDOWN within the following ~~20~~ hours. HOT 12 |

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify each required MSSV lift setpoint per Table 4.7-1. No additional Surveillance Requirements other than those required by the Inservice Testing Program. 1

CONTAINMENT SYSTEMS

CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Five containment cooling fans shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3 and 4
ADD

ACTION:

- a. With one or two of the above required containment cooling fans inoperable, restore the inoperable cooling fan(s) to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With three or more of the above required containment cooling fans inoperable, restore at least three cooling fans to OPERABLE status within 1 hour or be in at least HOT STANDBY WITHIN the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the remaining inoperable cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each containment cooling fan shall be demonstrated OPERABLE:

3/4.7 PLANT SYSTEMS

3/4.7.1 TURBINE CYCLE

SAFETY VALVES

LIMITING CONDITION FOR OPERATION

3.7.1.1 All main steam line code safety valves (MSSVs) associated with each steam generator shall be OPERABLE with lift settings as specified in Table 3.7-4.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

- a. With one or two main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valve is restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD~~ SHUTDOWN within the following ~~30~~ hours. HOT 12
- b. With three main steam line code safety valves inoperable in one or more steam generators, operation in Modes 1, 2 and 3 may proceed provided, that within 4 hours, either the inoperable valves are restored to OPERABLE status or reduce power to less than or equal to the applicable percent of RATED THERMAL POWER per Table 3.7-1 and within 36 hours, reduce the Power Range Neutron Flux High trip setpoint to less than or equal to the RATED THERMAL POWER per Table 3.7-1; otherwise, be in at least HOT STANDBY within the next 6 hours and in ~~COLD~~ SHUTDOWN within the following ~~30~~ hours. HOT 12

SURVEILLANCE REQUIREMENTS

4.7.1.1 Verify each required MSSV lift setpoint per Table 3.7-4. No additional Surveillance Requirements other than those required by the Inservice Testing Program. 