

July 17, 1997

Mr. Leon R. Eliason
Chief Nuclear Officer & President-
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 (TAC NOS. M95752 AND M95753)

Dear Mr. Eliason:

The Commission has issued the enclosed Amendment Nos. 198 and 181 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated June 18, 1996, as supplemented August 19, 1996, April 28, 1997, and June 11, 1997.

These amendments change TS 5.2.2, "Design Pressure and Temperature," by adding design parameters for Main Steam Line Break (MSLB). The MSLB analysis results in a higher containment air temperature than the current value in TS 5.2.2.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/
Leonard N. Olshan, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/311

- Enclosures: 1. Amendment No. 198 to License No. DPR-70
- 2. Amendment No. 181 to License No. DPR-75
- 3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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These amendments change TS 5.2.2, "Design Pressure and Temperature," by adding design parameters for Main Steam Line Break (MSLB). The MSLB analysis results in a higher containment air temperature than the current value in TS 5.2.2.

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3. Safety Evaluation

cc w/encls: See next page

Mr. Leon R. Eliason
Public Service Electric & Gas
Company

Salem Nuclear Generating Station,
Units 1 and 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 198
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated June 18, 1996, as supplemented August 19, 1996, April 28, 1997, and June 11, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-70 is hereby amended to read as follows:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 198, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

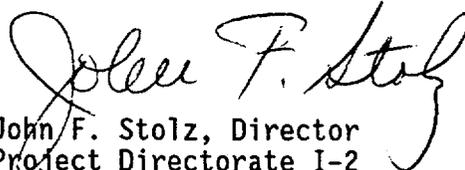
In addition, the license is amended by changes to Appendix C as indicated in the attachment to this license amendment, and paragraph 2.C.(10) of the Facility Operating License No. DPR-70 is amended to read as follows:

(10) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 198, are hereby incorporated into this license. Public Service Electric and Gas Company shall operate the facility in accordance with the Additional Conditions.

3. This license amendment is effective as of its date of issuance, to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

- Attachments: 1. Page 1 to Appendix C of License* DPR-70
2. Changes to the Technical Specifications

Date of Issuance: July 17, 1997

* Page 1 of Appendix C is attached, for convenience, for the composite license to reflect this change.

ATTACHMENT TO LICENSE AMENDMENT NO. 198

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

1. Remove

Appendix C, page 1

Insert

Appendix C, page 1

2. Revise Appendix A as follows:

Remove Pages

5-4

Insert Pages

5-4

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-70

Public Service Electric and Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company, and Atlantic City Electric Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
192	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated January 11, 1996, as supplemented by letters dated February 26, May 22, June 27, July 12, December 23, 1996, and March 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 21, 1997.
194	The licensee is authorized to upgrade the initiation circuitry for the power operated relief valves, as described in the licensee's application dated January 31, 1997, as supplemented by letters dated March 14, April 8, and April 28, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem, Unit 1.
196	Containment Fan Cooler Units The licensee shall complete all modifications associated with the amendment request concerning Containment Fan Cooler Unit (CFCU) response time dated October 25, 1996, as described in the letters supplementing the amendment request dated December 11, 1996, January 28, March 27, April 24, June 3, and June 12, 1997, prior to entry into Mode 3 following refueling outage 12. All modifications made in support of this amendment request and described in the referenced submittals shall be in conformance with the existing design basis for Salem Unit 1, and programmatic controls for tank monitoring instrumentation shall be as described in the letter dated April 24, 1997. Post modification testing and confirmatory analyses shall be as described in the letter dated March 27, 1997. Future changes to the design described in these submittals may be made in accordance with the provisions of 10 CFR 50.59. Further, the administrative controls associated with CFCU operability and containment integrity described in the letters dated March 27 and April 24, 1997, shall not be relaxed or changed without prior staff review until such time as the license has been amended to include the administrative controls as technical specification requirements.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem, Unit 1.
198	The licensee shall perform an evaluation of the containment liner anchorage by November 30, 1997, for the loading induced on the containment liner during a Main Steam Line Break event to confirm the assumptions provided in the Preliminary Safety Analysis Report and Updated Final Safety Analysis Report.	The amendment shall be implemented within 30 days from July 17, 1997.

DESIGN FEATURES

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DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment is designed and shall be maintained for a maximum internal pressure of 47 psig. Containment air temperatures up to 351.3°F are acceptable providing the containment pressure is in accordance with that described in the UFSAR.

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The reactor shall contain at least 193 fuel assemblies. Each assembly shall consist of a matrix of zircaloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with NRC-approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

CONTROL ROD ASSEMBLIES

5.3.2 The reactor core shall contain 53 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN FEATURE AND TEMPERATURE

5.4.1 The reactor coolant system is designed and shall be maintained:



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 181
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated June 18, 1996, as supplemented August 19, 1996, April 28, 1997, and June 11, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 181, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

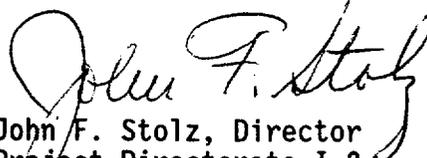
In addition, the license is amended by changes to Appendix C as indicated in the attachment to this license amendment, and paragraph 2.C.(26) of the Facility Operating License No. DPR-75 is amended to read as follows:

(26) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 181, are hereby incorporated into this license. Public Service Electric and Gas Company shall operate the facility in accordance with the Additional Conditions.

3. This license amendment is effective as of its date of issuance, to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

- Attachments: 1. Page 1 to Appendix C of License* DPR-75
2. Changes to the Technical Specifications

Date of Issuance: July 17, 1997

* Page 1 of Appendix C is attached, for convenience, for the composite license to reflect this change.

ATTACHMENT TO LICENSE AMENDMENT NO. 181

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

1. Remove

Appendix C, page 1

Insert

Appendix C, page 1

2. Revise Appendix A as follows:

Remove Pages

5-4

Insert Pages

5-4

APPENDIX C

ADDITIONAL CONDITIONS
OPERATING LICENSE NO. DPR-75

Public Service Electric and Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company, and Atlantic City Electric Company shall comply with the following conditions on the schedules noted below:

Amendment Number	Additional Condition	Implementation Date
175	The licensee is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this amendment shall include the relocation of these technical specification requirements to the appropriate documents, as described in the licensee's application dated January 11, 1996, as supplemented by letters dated February 26, May 22, June 27, July 12, December 23, 1996, and March 17, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented within 60 days from March 21, 1997.
177	The licensee is authorized to upgrade the initiation circuitry for the power operated relief valves, as described in the licensee's application dated January 31, 1997, as supplemented by letters dated March 14, April 8, and April 28, 1997, and evaluated in the staff's safety evaluation attached to this amendment.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem, Unit 2.
179	Containment Fan Cooler Units All modifications made in support of the amendment request concerning Containment Fan Cooler Unit (CFCU) response time dated October 25, 1996, as described in the letters supplementing the amendment request dated December 11, 1996, January 28, March 27, April 24, June 3, and June 12, 1997, shall be in conformance with the existing design basis for Salem Unit 2, and programmatic controls for tank monitoring instrumentation shall be as described in the letter dated April 24, 1997. Post modification testing and confirmatory analyses shall be as described in the letter dated March 27, 1997. Future changes to the design described in these submittals may be made in accordance with the provisions of 10 CFR 50.59. Further, the administrative controls associated with CFCU operability and containment integrity described in the letters dated March 27 and April 24, 1997, shall not be relaxed or changed without prior staff review until such time as the license has been amended to include the administrative controls as technical specification requirements.	The amendment shall be implemented prior to entry into Mode 3 from the current outage for Salem, Unit 2.
181	The licensee shall perform an evaluation of the containment liner anchorage by November 30, 1997, for the loading induced on the containment liner during a Main Steam Line Break event to confirm the assumptions provided in the Preliminary Safety Analysis Report and Updated Final Safety Analysis Report.	The amendment shall be implemented within 30 days from July 17, 1997.

DESIGN FEATURES

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DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment is designed and shall be maintained for a maximum internal pressure of 47 psig. Containment air temperatures up to 351.3°F are acceptable providing the containment pressure is in accordance with that described in the UFSAR.

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The reactor shall contain at least 193 fuel assemblies. Each assembly shall consist of a matrix of zircaloy or ZIRLO clad fuel rods with an initial composition of natural or slightly enriched uranium dioxide as fuel material. Limited substitutions of zirconium alloy or stainless steel filler rods for fuel rods, in accordance with NRC-approved applications of fuel rod configurations, may be used. Fuel assemblies shall be limited to those fuel designs that have been analyzed with applicable NRC staff approved codes and methods and shown by tests or analyses to comply with all fuel safety design bases. A limited number of lead test assemblies that have not completed representative testing may be placed in nonlimiting core regions.

CONTROL ROD ASSEMBLIES

5.3.2 The reactor core shall contain 53 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN FEATURE AND TEMPERATURE

- 5.4.1 The reactor coolant system is designed and shall be maintained:
- a. In accordance with the code requirement specified in Section 4.1 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
 - b. For a pressure of 2485 psig, and
 - c. For a temperature of 650°F, except for the pressurizer which is 680°F.

VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 12,811 ± 100 cubic feet at a nominal T_{avg} of 581.0°F.



UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 198 AND 181 TO FACILITY OPERATING
LICENSE NOS. DPR-70 AND DPR-75
PUBLIC SERVICE ELECTRIC & GAS COMPANY
PHILADELPHIA ELECTRIC COMPANY
DELMARVA POWER AND LIGHT COMPANY
ATLANTIC CITY ELECTRIC COMPANY
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated June 18, 1996, as supplemented August 19, 1996, April 28, 1997, and June 11, 1997, the Public Service Electric & Gas Company (the licensee, PSE&G) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would change TS 5.2.2, "Design Pressure and Temperature," by adding design parameters for Main Steam Line Break (MSLB). The MSLB analysis results in a higher containment air temperature than the current value in TS 5.2.2. The August 19, 1996, April 28, 1997, and June 11, 1997, letters provided clarifying information that did not change the initial proposed no significant hazards consideration determination nor the Federal Register notice.

2.0 EVALUATION

The licensee stated in its June 18, 1996, letter that recent calculations have determined that a maximum temperature of 351.3°F, concurrent with a pressure of 25 pounds per square inch gauge (psig), could exist following an MSLB. The temperature specified in TS 5.2.2 was 271°F. (This discrepancy was reported in LER 272/95-016-0, dated August 18, 1995.) The proposed change would eliminate the temperature of 271°F and replace it with, "Containment air temperatures up to 351.3°F are acceptable providing the containment pressure is in accordance with that described in the [Updated Final Safety Analysis Report] UFSAR."

The licensee reviewed the structural analysis of the containment concrete and liner plate, and the environmental qualification of equipment, to determine the significance of the increase in temperature.

2.1 Structural Considerations

The major differences in the design of the concrete containments between the Salem units and most other nuclear plants are that (1) the Salem design used the factored load design for all load combinations including the structural integrity test (SIT), which should be considered on the basis of the working stress design, and (2) the steel liner is considered to contribute to the tensile strength of the containment, which is generally not considered.

The yield strengths of the steel materials are: 60 ksi for reinforcing bars and 32 ksi for the liner. The compressive strength of concrete is 3,500 psi. The liner is attached to the concrete shell wall through the use of 1/2 in. diameter studs spaced at 15 inches horizontally and vertically. The inside diameter of the containment is 140 feet, and the concrete wall thickness is 4.5 feet for the cylinder portion with a liner thickness of three-eighths of an inch. The hoop reinforcing bar area is 12.8 square inches per foot.

The combined effects of temperature and pressure on the reinforced concrete wall and the steel liner are analyzed for the loss-of-coolant accident (LOCA) and MSLB conditions respectively, taking into account the interaction between the liner and the concrete for the load combination consisting of pressure and temperature only and the results of the analysis are as follows:

LOCA:	rebar stress = 36.927 ksi,	liner stress = 3.48 ksi (tension)
MSLB:	rebar stress = 27.964 ksi	liner stress = 21.09 ksi (compres.).

The staff performed the above calculation without using any load factor because the staff's evaluating the leaktight integrity of the liner, not the structural integrity of the containment. The above results, as expected, confirm the general observation that the LOCA pressure controls the rebar stress and the MSLB temperature controls the compressive stress of the liner. For a steel liner under compression, there is concern that the liner may buckle. If it does buckle, the buckling may lead to cracking of the liner and the shearing off of the anchors, jeopardizing the leaktight integrity.

The licensee provided the information on the original design of the liner and liner anchor system. The original liner analysis indicates the critical buckling stress for the 3/8-inch liner is more than twice the yield stress of 32 ksi for the liner steel material. Since the liner stress resulting from MSLB is only 21.09 ksi, buckling should not occur. However, due to possible differences in workmanship, plate thickness, yield stress, alignment, etc., the actual critical buckling load may be more or less than that calculated. If in two adjacent panels, one panel has a lateral deflection and the other does not, the critical buckling load of the plate with the deflection will be lower than the plate without the deflection. Such a condition gives rise to a shearing force across the anchor stud. Shearing force was considered in the original design of the anchor stud by estimating the potential strain in the liner when it yields. From the strain displacement of the liner, a

calculation was made to determine if the deflection of the stud can accommodate the displacement without giving rise to a high shear stress in the stud. The tension in the stud is estimated by assuming the stud will act as a lateral support to prevent the liner buckling when it is subjected to a compressive stress of 25 ksi. The lateral load is taken as 2% of the liner buckling load, which is assumed to be the compressive load in the liner due to the 25 ksi compressive stress in the liner.

PSE&G did not perform a systematic analysis of the liner-anchor system and there are no specific design calculations for the original design. It was analyzed piecemeal through a number of assumptions and judgements. However, PSE&G claimed: "Three tensile and three shear tests were performed on test assemblies approximating as close as possible to the actual welded stud configuration used in the field. These test specimen studs pulled from the liner at 74,500-80,600 psi in tension and 62,600-67,000 psi in shear. Neither failure mode affected the leaktight integrity of the liner plate." The tests gave the ultimate capacities of the liner-anchor system and were not intended to validate the analysis for the LOCA condition or any other condition. PSE&G used the test results to envelope those from its empirical analyses. The licensee committed to provide an analysis of the containment liner anchorage for the loading induced on the containment liner during an MSLB event to confirm the assumptions in the PSAR and the UFSAR. The staff found this to be acceptable, and considers this to be a condition to the License.

To reinforce its position that the steel liner was adequately designed, PSE&G provided the staff with information about the original steel liner design as contained in the Preliminary Safety Analysis Report (PSAR). The information is summarized in a table which shows the hoop and the vertical stresses in the liner and the resulting Margin of Capability for each load combination. For tension, it is defined as the ratio between the yield stress to the maximum tensile stress component. For compression, it is the ratio between the critical buckling stress for combined compression and the combined compressive stress. From the tabulated results, we observed that the margin of capability is greater than 1.0. For the adequacy of the stud anchors, the PSAR cited the tests done at the University of Illinois under the sponsorship of the manufacturer of the Nelson studs. There was extensive speculative discussion about the behavior of the liner and its anchors but there is no detailed analysis to support what was discussed. It is not clear how the stresses in the table were obtained. The licensee will address the stresses in the analysis mentioned above.

Modifications required for the reactor coolant pump platform have been completed on Unit 2. Modifications required for the Unit 1 coolant pump platform and containment spray piping support are to be completed before the restart. PSE&G has provided a set of sketches showing how various modifications are carried out to relieve the thermal stresses due to the increased temperature. The staff has reviewed the modifications and found them to be appropriate.

The staff has reviewed the information provided by PSE&G for the Salem TS change with respect to the containment temperature resulting from MSLB which is higher than the temperature in the original TS resulting from a LOCA. It is clear that LOCA pressure governs the structural integrity of the containment and MSLB temperature controls the steel liner design, i.e., the leaktight integrity of the containment. In order to be leaktight, the liner should not be cracked as a result of the liner being subjected to bending and/or tensile stress. Such a condition exists when a liner panel is under compression and buckles while the adjacent panels retain their original configuration, resulting in a shear across the anchor with the potential of separating the liner from its anchor. The ultimate tension and shear forces obtained in tests represent the maximum values for the liner-anchor system used. However, in the information provided there is no quantitative computation of the shear and tension force applied on the liner-anchor system due to the load condition involving the high temperature. The licensee will provide this information in the analysis mentioned above.

In summary, we find the proposed changes acceptable in the structural area based on the following:

- a. The structural integrity of the concrete containment is maintained because it is governed by the LOCA pressure loading, which is greater than the pressure loading of the MSLB.
- b. Prior to restart, modifications will be completed on the reactor coolant pump platforms (both units) and the containment spray piping supports (Unit 1 only).
- c. Testing was performed to demonstrate the adequacy of the liner and liner-anchor system. The test results provide the staff with reasonable assurance that the liner will maintain its leaktight integrity following the MSLB.

Additionally, as mentioned above, by letter dated June 11, 1997, the licensee has committed to perform an evaluation of the containment liner anchorage by November 30, 1997, for the loading induced on the containment liner during an MSLB event to confirm the assumptions provided in the PSAR and the UFSAR. Accordingly, an appropriate license condition will be included in Appendix C of the Operating Licenses for the Salem units.

2.2 Environmental Qualification

Supplement 4 to the staff's Safety Evaluation Report for Salem (NUREG-0517) accepted 350°F for use in equipment qualification for Unit 2. In its June 18, 1996, letter, the licensee stated that the increase from 350°F to 351.3°F does not have a significant impact on equipment qualification. By telephone call, the staff requested verification that the equipment inside containment had been reviewed against the higher temperature. By letter dated August 19, 1996, the licensee stated that it had reviewed the vendor equipment qualification data against the revised temperature profiles and that this

review supported the qualified status of the equipment and demonstrated that the operability of the equipment would not be jeopardized by the increase in containment temperatures. The staff concludes that the small increase in temperature is generally of little or no consequence. Accordingly, the proposed maximum temperature of 351.3 °F is acceptable. Further, the licensee's evaluation provides adequate assurance that safety-related equipment will function as required during accident conditions. However, as a separate initiative outside the scope of this evaluation, the staff may review the adequacy of the licensee's analytical methodology.

2.3 Information in UFSAR

The proposed change refers to the UFSAR for some of the information regarding the design parameters of containment pressure and temperature. (In response to a staff verbal request, the licensee identified the specific sections of the UFSAR that will contain this information in its letter of August 19, 1996.) Changes to these design parameters are controlled by the requirements of 10 CFR 50.59. Furthermore, these design parameters are related to existing TS Limiting Condition for Operations (LCOs) that establish acceptable requirements for ensuring that the performance of the containment and reactor coolant system is maintained and that any changes which may impact safety would receive prior NRC review and approval. Since the features with a potential to impact safety are sufficiently addressed by the LCOs, and since the associated design features, if altered in accordance with 10 CFR 50.59, would not result in a significant impact on safety, the criteria of 10 CFR 50.36(c)(4) for including these design features in the TS are not met. Therefore, the staff concludes that referring to the UFSAR for the information regarding these design features is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (61 FR 37302). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is 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 Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: July 17, 1997