

September 30, 2005

Mr. William Levis  
Senior Vice President & Chief Nuclear Officer  
PSEG Nuclear LLC - X04  
Post Office Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2 – ISSUANCE  
OF AMENDMENTS TO RESOLVE NON-CONSERVATIVE TECHNICAL  
SPECIFICATIONS RELATED TO CONTAINMENT FAN COOLER UNITS  
(TAC NOS. MC2726 AND MC3649)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment Nos. 266 and 248 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Nuclear Generating Station (Salem), Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated April 15, 2004, as supplemented by letters dated August 11, 2004, and August 11, 2005.

Your April 15, 2004, application requested changes to reflect the addition of the chilled water system to provide cooling water to the containment fan cooling units (CFCUs) for Salem, Unit No. 1. The application also requested a change to a non-conservative TS action statement for both units. The existing action statement would allow for 72 hours of continued operation with three or more CFCUs out of service, provided that both containment spray pumps were operable. Your August 11, 2004, supplement revised some elements of the original request, due to ongoing engineering of the proposed modification to Salem, Unit No. 1. Your August 11, 2005, letter withdrew the request related to the CFCU modifications, but maintained the request to change the non-conservative TSs.

W. Levis

-2-

The amendments revise the non-conservative TSs to require the CFCUs restored to service within one hour, instead of 72 hours, or the plant to commence a shutdown.

A copy of the staff's Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

***/RA/***

Stewart N. Bailey, Sr. Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-272 and 50-311

Enclosures: 1. Amendment No. 266 to  
License No. DPR-70  
2. Amendment No. 248 to  
License No. DPR-75  
3. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

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ACCESSION NUMBER: ML052650368 \*Input provided. No major changes made.

OFFICE	PDI-2/PM	PDI-2/LA	SPSB/SC	OGC	PDI-2/SC
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DATE	9/27/05	9/26/05	9/12/05*	9/27/05	9/29/05

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PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 266  
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC (PSEG) on behalf of PSEG and Exelon Generation Company, LLC (the licensees) dated April 15, 2004, as supplemented by letters dated August 11, 2004, and August 11, 2005, 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 Title 10 of the *Code of Federal Regulations* (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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 266, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Darrell J. Roberts, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 30, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 266

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Replace the following page of the Appendix A, Technical Specifications, with the attached revised page as indicated. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page  
3/4 6-11

Insert Page  
3/4 6-11

PSEG NUCLEAR, LLC

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 248  
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC (PSEG) on behalf of PSEG and Exelon Generation Company, LLC (the licensees) dated April 15, 2004, as supplemented by letters dated August 11, 2004, and August 11, 2005, 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 Title 10 of the *Code of Federal Regulations* (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. 248, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Darrell J. Roberts, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 30, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 248

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Replace the following page of the Appendix A, Technical Specifications, with the attached revised page as indicated. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page

3/4 6-12

Insert Page

3/4 6-12

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 266 AND 248 TO FACILITY OPERATING  
LICENSE NOS. DPR-70 AND DPR-75  
PSEG NUCLEAR, LLC  
EXELON GENERATION COMPANY, LLC  
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated April 15, 2004, as supplemented by letters dated August 11, 2004, and August 11, 2005, PSEG Nuclear LLC (PSEG or the licensee) requested a revision to the Technical Specifications (TSs) for the Salem Nuclear Generating Station (Salem), Unit Nos. 1 and 2. The supplement dated August 11, 2005, did not increase the scope of the initial proposed no significant hazards consideration determination.

The April 15, 2004, application requested changes to reflect the addition of a new closed-loop chilled water system to provide cooling water to the containment fan cooling units (CFCUs) during normal operation for Salem, Unit No. 1. The request involved changes to the system configuration and a revised analysis of the containment temperature and pressure response following a design-basis event. The application also requested a change to a non-conservative TS action statement for both Salem units. The August 11, 2004, supplement revised portions of the original application based on ongoing engineering evaluations of the modifications to Salem Unit No. 1. By letters dated October 10, 2004, and February 14, 2005, the Nuclear Regulatory Commission (NRC or the Commission) requested additional information related to the containment response analysis and the plant modifications, respectively. PSEG subsequently informed the NRC that they were reconsidering the modification, and would most likely withdraw the request. By supplemental letter dated August 11, 2005, PSEG withdrew the portions of the request related to the Salem Unit No. 1 modification, but maintained the request to change the non-conservative TS action statement.

The non-conservative action statement, TS 3.6.2.3 Action B, currently allows three or more containment cooling fans to be inoperable provided both containment spray pumps are operable. PSEG was unable to find justification to support this action statement since it allows the plant to operate for 72 hours with less than three CFCUs operable. The proposed change will restore at least three cooling fans to operable status within one hour regardless of the number of containment spray pumps operable. PSEG stated that this non-conservative action statement was discovered during preparation of the April 15, 2004, submittal. In accordance

with NRC Administrative Letter 98-10, PSEG has implemented temporary instructions that will require the affected Salem unit to enter TS 3.0.3 with less than three CFCUs operable regardless of the number of containment spray pumps operable. The licensee stated that the temporary instructions would remain in place until TS 3.5.2.3 Action B is amended.

## 2.0 REGULATORY EVALUATION

The containment heat removal system is designed to meet the requirements of Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR), Appendix A, General Design Criterion (GDC) 38, "Containment Heat Removal"; GDC 39, "Inspection of Containment Heat Removal System"; and GDC 40, "Testing of Containment Heat Removal System." The proposed revision to TS 3.5.2.3 Action B does not impact conformance with the provisions of these GDCs.

Section 50.36 of 10 CFR, "Technical Specifications," specifies requirements that the TSs include items in five specific categories. These categories include: 1) safety limits, limiting safety system settings and limiting control settings, 2) limiting conditions for operations (LCOs), 3) surveillance requirements, 4) design features, and 5) administrative controls. Under LCOs, 10 CFR 50.36(c)(2)(ii) specifies that a TS LCO be established for each item meeting one of four criteria. Criterion 3, specified in 10 CFR 50.36(c)(2)(ii)(C), is a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier.

## 3.0 TECHNICAL EVALUATION

The Salem Updated Final Safety Analysis Report, Section 6.2.2 "Containment Heat Removal Systems," discusses the containment spray system and the containment fan cooling system. These systems provide containment atmosphere cooling to limit the pressure and temperature inside containment following a postulated accident to less than the design limits. The systems are both designed with redundant components so that a single failure will not prevent the function from being fulfilled. The systems mitigate the radiological consequences of a postulated accident by removing fission products from the containment atmosphere and by reducing the containment pressure, thereby reducing the driving force for leakage of fission products from the containment. The containment spray system removes radioactive iodine from the containment atmosphere, while the containment cooling system provides filtration of the containment atmosphere and mixing between the sprayed and un-sprayed regions in containment. There are two trains of containment spray and five CFCUs. The current accident analyses assume a minimum of one containment spray pump and three CFCUs in operation for determining the dose consequences of a design-basis event.

The existing TS 3.6.2.3 Action B states:

With three or more of the above required containment cooling fans inoperable, and both containment spray systems OPERABLE, restore at least three cooling fans to OPERABLE status within 72 hours or be in 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 a least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Thus, the existing action statement allows operation for 72 hours with fewer than three operable CFCUs. This condition is not supported by the accident analyses. The licensee proposed to change the action statement such that it will require at least three CFCUs to be restored to operable status within 1 hour. The proposed action statement will state:

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 a least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

The proposed change to TS 3.6.2.3 Action B requires prompt action to correct the condition that is outside the design basis, and maintains that five CFCUs remain operable to ensure that, upon a single failure, a minimum of three CFCUs will provide the required containment cooling, filtration, and mixing consistent with the current accident analysis. Therefore, the staff finds the proposed action statement to be acceptable.

#### 4.0 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 recommended a prompt correction to non-conservative TS 3.6.2.3 Action B. This amendment corrects TS 3.6.2.3 Action B.

#### 5.0 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 and changes TSs. 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 (69 FR 60684; October 12, 2004). 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.

#### 6.0 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.

Principal Contributor: R. Goel

Date: September 30, 2005