Mr. Harold W. Keiser
Chief Nuclear Officer & F_ident
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

April 30, 1999

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
(TAC NOS. MA1373 AND MA1374)

Dear Mr. Keiser:

The Commission has issued the enclosed Amendment Nos. 221 and 203 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 March 26, 1998.

These amendments revise TS 3/4.8.2.1, "AC Distribution - Operating," to add operability conditions and associated action statements for the 115-volt vital instrument bus (VIB) D and inverter. The amendment completes the recommended action from NRC Generic Letter 91-11, Resolution of Generic Issues 48, "LCOs for Class 1E Vital Instrument Buses," and 49, "Interlocks and LCOs for Class 1E Tie Breakers," pursuant to 10 CFR 50.54(f), dated July 18, 1991.

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

Sincerely,

Original signed by:
Patrick D. Milano, Senior Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/50-311

Enclosures: 1. Amendment No. 221 to License No. DPR-70
2. Amendment No. 203 to License No. DPR-75
3. Safety Evaluation

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

April 30, 1999

Mr. Harold W. Keiser
Chief Nuclear Officer & President
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
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SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
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Dear Mr. Keiser:

The Commission has issued the enclosed Amendment Nos. 221 and 203 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 March 26, 1998.

These amendments revise TS 3/4.8.2.1, "AC Distribution - Operating," to add operability conditions and associated action statements for the 115-volt vital instrument bus (VIB) D and inverter. The amendment completes the recommended action from NRC Generic Letter 91-11, Resolution of Generic Issues 48, "LCOs for Class 1E Vital Instrument Buses," and 49, "Interlocks and LCOs for Class 1E Tie Breakers," pursuant to 10 CFR 50.54(f), dated July 18, 1991.

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Docket Nos. 50-272/50-311

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License No. DPR-70
2. Amendment No. 203 to
License No. DPR-75
3. Safety Evaluation

cc w/encls: See next page

Mr. Harold W. Keiser
Public Service Electric & Gas
Company

Salem Nuclear Generating Station,
Units 1 and 2

cc:

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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. 221
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 March 26, 1998, 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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 221 , 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, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James W. Clifford, 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: April 30, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 221

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 8-6	3/4 8-6

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A. C. electrical busses shall be OPERABLE and energized from sources of power other than the diesel generators:

4 kvolt	Vital Bus # 1A
4 kvolt	Vital Bus # 1B
4 kvolt	Vital Bus # 1C
460 volt	Vital Bus # 1A and associated control centers
460 volt	Vital Bus # 1B and associated control centers
460 volt	Vital Bus # 1C and associated control centers
230 volt	Vital Bus # 1A and associated control centers
230 volt	Vital Bus # 1B and associated control centers
230 volt	Vital Bus # 1C and associated control centers
115 volt	Vital Instrument Bus # 1A and Inverter *
115 volt	Vital Instrument Bus # 1B and Inverter *
115 volt	Vital Instrument Bus # 1C and Inverter *
115 volt	Vital Instrument Bus # 1D and inverter *

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With less than the above complement of A.C. busses OPERABLE or energized, restore the inoperable bus to OPERABLE and energized status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one inverter inoperable, energize the associated A. C. Vital Bus within 8 hours; restore the inoperable 1A, 1B, or 1C inverter to OPERABLE and energized status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; restore the inoperable 1D inverter to OPERABLE and energized status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. busses shall be determined OPERABLE and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated power availability.

(*) An inverter may be disconnected from its DC source for up to 24 hours for the purpose of performing an equalizing charge on its associated battery bank provided (1) its vital bus is OPERABLE and energized, and (2) the vital busses associated with the other battery banks are OPERABLE and energized.

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. 203
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 March 26, 1998, 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. 203 , 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, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

James W. Clifford, 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: April 30, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 203

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 8-8	3/4 8-8

ELECTRICAL POWER SYSTEMS

3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

A.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A. C. electrical busses shall be OPERABLE and energized from sources of power other than the diesel generators:

4 kvolt	Vital Bus # 2A	
4 kvolt	Vital Bus # 2B	
4 kvolt	Vital Bus # 2C	
460 volt	Vital Bus # 2A	and associated control centers
460 volt	Vital Bus # 2B	and associated control centers
460 volt	Vital Bus # 2C	and associated control centers
230 volt	Vital Bus # 2A	and associated control centers
230 volt	Vital Bus # 2B	and associated control centers
230 volt	Vital Bus # 2C	and associated control centers
115 volt	Vital Instrument Bus # 2A	and Inverter *
115 volt	Vital Instrument Bus # 2B	and Inverter *
115 volt	Vital Instrument Bus # 2C	and Inverter *
115 volt	Vital Instrument Bus # 2D	and Inverter *

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With less than the above complement of A.C. busses OPERABLE or energized, restore the inoperable busses to OPERABLE and energized status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one inverter inoperable, energize the associated A.C. Vital Bus within 8 hours; restore the inoperable 2A, 2B, or 2C inverter to OPERABLE and energized status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; restore the inoperable 2D inverter to OPERABLE and energized status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. busses and inverters shall be determined OPERABLE and energized from A.C. sources other than the diesel generators at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

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*An inverter may be disconnected from its D.C. source for up to 24 hours for the purpose of performing an equalizing charge on its associated battery bank provided (1) its vital bus is OPERABLE and energized, and (2) the vital busses associated with the other battery banks are OPERABLE and energized.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 221 AND 203 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 March 26, 1998, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise TS 3/4.8.2.1, "AC Distribution - Operating," to add operability conditions and associated action statements for the 115-volt vital instrument bus (VIB) D and inverter. The proposed amendments complete the recommended action from NRC Generic Letter (GL) 91-11, Resolution of Generic Issues 48, "LCOs for Class 1E Vital Instrument Buses," and 49, "Interlocks and LCOs for Class 1E Tie Breakers," pursuant to 10 CFR 50.54(f), dated July 18, 1991.

2.0 EVALUATION

2.1 Background

In GL 91-11, the NRC staff recommended that licensees have procedures that include outage time limitations and surveillance requirements for VIB inverters, or other onsite power sources to the VIBs. This GL also included tie-breakers that can connect class 1E buses (ac or dc) on a single unit or that can connect class 1E buses between units at the same site. In letters dated January 31 and August 14, 1992, the licensee committed to procedural controls on the 115-volt D VIB and inverter in the form of a TS interpretation (TSI), in lieu of incorporating these actions into the facility TSs. The licensee has implemented the TSI. However, the licensee is now opting to incorporate the operating requirements of the TSI into TS 3.8.2.1. The Incorporation of this interpretation into the TSs eliminates the need for the TSI.

2.2 Evaluation

TS Section 3.8.2.1 Limiting Condition for Operation (LCO)

a. The following line will be added, "115 volt Vital Instrument Bus 1(2)D and Inverter." The proposed change is consistent with the recommendation of GL 91-11, which requires the VIB as part of TS onsite power distribution, and will eliminate the TSI. The NRC staff finds this change to be acceptable.

b. For Salem Unit 1 only, the licensee proposed adding the following note:

"(*) An inverter may be disconnected from its DC source for up to 24 hours for the purpose of performing an equalizing charge on its associated battery bank provided (1) its vital bus is OPERABLE and energized, and (2) the vital buses associated with other battery banks are OPERABLE and energized."

An inverter may sustain damage from a resulting voltage condition if it is not disconnected from its dc source during the performance of equalizing charge on its associated battery bank. The 24-hour allowed outage time (AOT) provision to allow the inverter to be disconnected from its dc source provides enough time to perform an equalizing charge on the battery bank. The note also requires that its vital bus be energized and operable, and that the vital buses associated with the other battery banks be operable. Thus, continued operability of the affected inverter is assured, while requiring all other inverters to be aligned to their respective batteries.

The proposed addition of the note will make the Salem Unit 1 and Unit 2 TSs consistent. This note is currently part of the Salem Unit 2 TSs and is consistent with NUREG 1431, Vol. 1, Revision 1, "Standard Technical Specifications Westinghouse Plant." Therefore, the NRC staff finds the proposed note to be acceptable.

c. For Salem Units 1 and 2, the licensee proposed adding an asterisk (*) to the word "inverters" to specify that the note at the bottom of the respective TS pages is applicable to the inverters.

The addition of the asterisks is an editorial change and is acceptable to the NRC staff.

TS Section 3.8.2.1 Action Statement (b)

a. The following designators 1(2) A, 1(2) B, or 1(2) C will be added between the words "inoperable" and "inverter".

The A, B, and C designators are added to Action (b) to clarify that the 24-hour time period allowed to restore an inoperable inverter to operable status applies only to the A, B, and C VIB inverters. The A, B, and C VIB and associated inverters have direct input into the automatic start and loading of emergency diesel generators (EDGs) through their associated safeguard equipment cabinet (SEC) and, therefore, their AOT remains unchanged. The NRC staff finds this change to be acceptable.

b. The following phrase will be added at the end of Action statement (b);

"restore the inoperable 1(2)D inverter to OPERABLE and energized status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

The licensee stated that 72 hours for this AOT is based upon allowing increased operating flexibility with the "D" VIB inverter inoperable because it does not affect the operation of any SEC. The licensee also stated that the proposed 72-hours AOT to restore the inoperable inverter to operable status is supported by a Salem probabilistic safety assessment (PSA). The baseline internal event core damage frequency (CDF) is based on Salem Unit 2; however, it is representative for both units. In its supplementary response to Generic Letter 91-11, dated August 14, 1992 (N92086), and re-stated in its letter dated October 28, 1992 (N92155), the licensee also stated that "A" priority work orders (i.e., Emergency Work Requiring Immediate Action) are issued when entering an action statement with an AOT of 72 hours or less. This requirement is contained in the Salem Nuclear Administrative Procedure for control of work activities. Additionally, the October 28,1992, letter amended the August 14, 1992, letter by increasing the "D" inverter unavailability (AOT) from 24 to 72 hours, as re-stated in the licensee's March 26,1998, submittal (N980038).

The NRC staff finds the addition of the TS requirements for the "D" 115-volt VIB and inverter incorporates actions that are currently being taken by the licensee under a TSI. The proposed changes add new requirements that are not currently in the TS and thus, are not considered to be a TS relaxation but rather, more restrictive changes. In addition, the licensee has confirmed the appropriateness of this action with respect to the Salem PSA. Thus, the NRC staff finds the proposed changes acceptable.

2.3 Summary

The proposed amendments will revise TS Section 3/4.8.2.1, "AC Distribution - Operating" by (1) making an editorial change to add an asterisk after the word "inverter" to specify that the note at the bottom of the TS page is applicable to the inverters, and (2) adding a note to the Salem Unit 1 TS section to make it consistent with the Salem Unit 2 TS. The NRC staff finds these changes to be acceptable.

The proposed amendments for both units also complete the recommended action of GL 91-11 for the "D" 115-volt VIB and associated inverter by incorporating the action as part of the TSs. The addition of this action does not involve any modification to the physical plants. The proposed changes are more restrictive since the changes incorporate actions not currently in the TSs. The proposed TS changes are also consistent with other provisions of the existing TSs and the applicable TS Bases. The NRC staff finds the changes to be 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 (63 FR 25117). 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.

Principal Contributor: S. K. Mitra

Date: April 30, 1999