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JUL 23 1982

Docket Nos. 50-272  
 and 50-311

Mr. Richard A. Uderitz, Vice President -  
 Nuclear  
 Public Service Electric and Gas Company  
 Mail Code T15A - P.O. Box 570  
 Newark, New Jersey 07101

Dear Mr. Uderitz:

The Commission has issued the enclosed Amendment No. 45 to Facility Operating License No. DPR-70 and Amendment No. 10 to Facility Operating License No. DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated June 16, 1981.

These amendments revise the Technical Specifications for both Units to provide undervoltage protection to the emergency safety features actuation instrumentation system.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

ORIGINAL SIGNED

William J. Ross, Project Manager  
 Operating Reactors Branch #1  
 Division of Licensing

Enclosures:

1. Amendment No. 45 to DPR-70
2. Amendment No. 10 to DPR-75
3. Safety Evaluation
4. Notice of Issuance

cc: w/enclosures  
 See next page

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*no objection  
 as to prm.*

*review 7/21/82*

OFFICE	DL:ORB#1 <i>CP</i>	DL:ORB#1 <i>W.R.</i>	PSB	DL:ORB#1 <i>S.Y.</i>	AD/OP:DL <i>T.N.</i>	OELD <i>M.</i>
SURNAME	C.Parrish	W.Ross: pr		S.Yarga	TNovak	MOORE
DATE	6/12/82	6/5/82	6/1/82	6/1/82	6/1/82	6/16/82

Mr. R. A. Uderitz  
Public Service Electric and Gas Company

cc: Mark J. Wetterhahn, Esquire  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

PUBLIC SERVICE ELECTRIC AND 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. 45  
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Public Service Electric and Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated June 16, 1981 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;
  - 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

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 45, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 23, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 45

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages

3/4 3-20  
3/4 3-26  
3/4 3-33

Insert Pages

3/4 3-20  
3/4 3-26  
3/4 3-33

SALEM - UNIT 1

3/4 3-20

Amendment No. 45

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. TO CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
Four Loops Operating	1 pressure/loop	2 pressures any loops	1 pressure any 3 loops		14*
Three Loops Operating	1 pressure/operating loop	1 pressure in any operating loop	1 pressure in any 2 operating loops		15
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water level--High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	14*
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC)	3	2	3	1, 2, 3, 4	13
7. UNDERVOLTAGE, VITAL BUS					
a. Loss of Voltage	3	2	3	1, 2, 3	14*
b. Sustained Degraded Voltage	3	2	3	1, 2, 3	14*

SALEM - UNIT 1

3/4 3-25

Amendment No. 45

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
5. TURBINE TRIP AND FEEDWATER ISOLATION		
a. Steam Generator Water Level-- High-High	< 67% of narrow range Instrument span each steam generator	< 68% of narrow range Instrument span each steam generator
6. UNDERVOLTAGE, VITAL BUS		
a. Loss of Voltage	$\geq 70\%$ of bus voltage	$\geq 65\%$ of bus voltage
b. Sustained Degraded Voltage	$\geq 91\%$ of bus voltage for $\leq 13$ seconds	$\geq 90\%$ of bus voltage for $\leq 15$ seconds

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
4. STEAM LINE ISOLATION				
a. Manual	N.A.	N.A.	R	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3
c. Containment Pressure-- High-High	S	R	M(3)	1, 2, 3
d. Steam Flow in Two Steam Lines--High Coincident with T <sub>avg</sub> -- Low or Steam Line Pressure--Low	S	R	M	1, 2, 3
5. TURBINE TRIP AND FEEDWATER ISOLATION				
a. Steam Generator Water Level--High-High	S	R	M	1, 2, 3
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC) LOGIC				
a. Inputs	N.A.	N.A.	M	1, 2, 3, 4
b. Logic, Timing and Outputs	N.A.	N.A.	M(1)	1, 2, 3, 4
7. UNDERVOLTAGE, VITAL BUS				
a. Loss of Voltage	S	R	M	1, 2, 3
b. Sustained Degraded Voltage	S	R	M	1, 2, 3

SOLEM - UNIT 1

3/4 3-33

Amendment No. 45



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

PUBLIC SERVICE ELECTRIC AND 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. 10  
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Public Service Electric and Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated June 16, 1981 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;
  - 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.

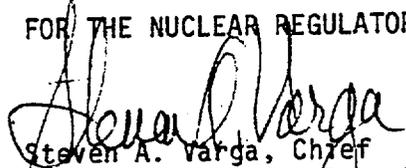
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 10, 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 the startup date from the first refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 23, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 10

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 3-20  
3/4 3-27  
3/4 3-35

Insert Pages

3/4 3-20  
3/4 3-27  
3/4 3-35

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
Four Loops Operating	1 pressure/loop	1 pressure any 2 loops	1 pressure any 3 loops		14*
Three Loops Operating	1 pressure/operating loop	1 pressure in any operating loop	1 pressure in any 2 operating loops		15
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water level-- High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	14*
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC)	3	2	3	1, 2, 3, 4	13
7. UNDERVOLTAGE, VITAL BUS					
a. Loss of Voltage	3	2	3	1, 2, 3	14*
b. Sustained Degraded Voltage	3	2	3	1, 2, 3	14*

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
5. TURBINE TRIP AND FEEDWATER ISOLATION		
a. Steam Generator Water Level-- High-High	< 67% of narrow range Instrument span each steam generator	< 68% of narrow range Instrument span each steam generator
6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC)	Not Applicable	Not Applicable
7. UNDERVOLTAGE, VITAL BUS		
a. Loss of Voltage	> 70% of bus voltage	> 65% of bus voltage
b. Sustained Degraded Voltage	≥ 91% of bus voltage for ≤ 13 seconds	≥ 90% of bus voltage for ≤ 15 seconds
8. AUXILIARY FEEDWATER		
a. Steam Generator Water Level-low-low	> 17% of narrow range Instrument span each steam generator	> 16% of narrow range Instrument span each steam generator
b. Undervoltage - RCP	> 70% RCP bus voltage	> 65% RCP bus voltage

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
<b>4. STEAM LINE ISOLATION</b>				
a. Manual	N.A.	N.A.	R	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3
c. Containment Pressure-- High-High	S	R	M(3)	1, 2, 3
d. Steam Flow in Two Steam Lines--High Coincident with T <sub>avg</sub> -- Low or Steam Line Pressure--Low	S	R	M	1, 2, 3
<b>5. TURBINE TRIP AND FEEDWATER ISOLATION</b>				
a. Steam Generator Water Level--High-High	S	R	M	1, 2, 3
<b>6. SAFEGUARDS EQUIPMENT CONTROL SYSTEM (SEC) LOGIC</b>				
a. Inputs	N.A.	N.A.	M	1, 2, 3, 4
b. Logic, Timing and Outputs	N.A.	N.A.	M(1)	1, 2, 3, 4
<b>7. UNDERVOLTAGE, VITAL BUS</b>				
a. Loss of Voltage	S	R	M	1, 2, 3
b. Sustained Degraded Voltage	S	R	M	1, 2, 3



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 45 TO FACILITY OPERATING LICENSE NO. DPR-70  
AND AMENDMENT NO. 10 TO FACILITY OPERATING LICENSE NO. DPR-75

PUBLIC SERVICE ELECTRIC AND GAS COMPANY,  
PHILADELPHIA ELECTRIC COMPANY,  
DELMARVA POWER AND LIGHT COMPANY, AND  
ATLANTIC CITY ELECTRIC COMPANY

SALEM NUCLEAR GENERATION STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-272 AND 50-311

Introduction

By letters dated June 2, 1977 and July 30, 1979 the staff advised Public Service Electric and Gas Company (the licensee) of our review of onsite emergency power systems for all operating reactors. The purpose of this review was to assess the susceptibility of safety related electrical equipment to sustain degraded voltage conditions. Each licensee was requested to compare the design of emergency power systems at their plants with the staff positions. The licensee responded by letters dated August 1, 1977, September 13, 1979, and March 3, 1980.

The staff reviewed the licensee's responses and approved the design modifications that were proposed to achieve an acceptable level of protection against degraded grid voltages. Our Safety Evaluation to this effect was transmitted to the licensee by letter dated January 19, 1981.

Subsequently, by letter of June 16, 1981, the licensee transmitted proposed changes to the Technical Specifications of Unit 1 and Unit 2 that implement the approved modifications. The proposed Technical Specifications are consistent with the approved undervoltage protection designs and acceptable.

### Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: July 23, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-272 and 50-311PUBLIC SERVICE ELECTRIC AND GAS COMPANY,  
PHILADELPHIA ELECTRIC COMPANY,  
DELMARVA POWER AND LIGHT COMPANY, AND  
ATLANTIC CITY ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 45 to Facility Operating License No. DPR-70 and Amendment No. 10 to Facility Operating License No. 75, issued to Public Service Electric and Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees), which revised Technical Specifications for operation of the Salem Nuclear Generating Station, Unit Nos. 1 and 2 (the facilities) located in Salem County, New Jersey. The amendments are effective as of the date of issuance for Unit No. 1 and as of the startup date from the first refueling outage for Unit No. 2.

The amendments revise the Technical Specifications for both units to provide undervoltage protection to the emergency safety features actuation instrumentation system.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

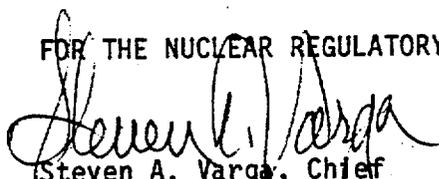
- 2 -

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d) (4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of these amendments.

For further details with respect to this action, see (1) the application for amendments dated June 16, 1981, (2) Amendment Nos. 45 and 10 to License Nos. DPR-70 and DPR-75, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W. Washington, D. C. and at the Salem Free Public Library, 112 West Broadway, Salem, New Jersey. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 23rd day of July, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing