

November 16 1993

Docket Nos. 50-272/311

Mr. Steven E. Miltenberger  
Vice President and Chief Nuclear  
Officer  
Public Service Electric & Gas  
Company  
Post Office Box 236  
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: POST ACCIDENT MONITORING SYSTEM, SALEM NUCLEAR GENERATING STATION,  
UNITS 1 AND 2 (TAC NOS. M85907 AND M85908)

The Commission has issued the enclosed Amendment Nos. 147 and 125 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 July 19, 1993, and supplemented by letter dated August 5, 1993.

These amendments delete Line Item 9, Boric Acid Tank Solution Level, from Tables 3.3-11 and 4.3-11 and the associated Action 3 of Technical Specification 3.3.3.7, Post Accident Monitoring System. You are requested to notify the NRC, in writing, when these amendments have been implemented at Salem, Units 1 and 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/

James C. Stone, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

9312080263 931116  
PDR ADOCK 05000272  
P PDR

Enclosures:

1. Amendment No. 147 to License No. DPR-70
2. Amendment No. 125 to License No. DPR-75
3. Safety Evaluation

cc w/enclosures:  
See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 16, 1993

Docket Nos. 50-272/311

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

Sincerely,

A handwritten signature in cursive script that reads "James C. Stone".

James C. Stone, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 147 to  
License No. DPR-70
2. Amendment No. 125 to  
License No. DPR-75
3. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Steven E. Miltenberger  
Public Service Electric & Gas  
Company

Salem Nuclear Generating Station,  
Units 1 and 2

cc:

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Public Service Commission of Maryland  
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ATTN: Chief Engineer  
231 E. Baltimore Street  
Baltimore, MD 21202-3486



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. 147  
License No. DPR-70

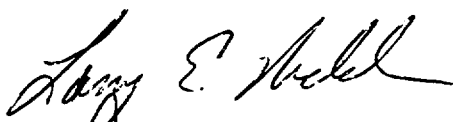
1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated July 19, 1993, and supplemented by letter dated August 5, 1993, 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. 147, 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Larry E. Nicholson, Acting Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 16, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 147

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages

3/4 3-54

3/4 3-56

3/4 3-57

Insert Pages

3/4 3-54

3/4 3-56

3/4 3-57

TABLE 3.3-11ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM NO. OF CHANNELS</u>	<u>ACTION</u>
1. Reactor Coolant Outlet Temperature - T <sub>HOT</sub> (Wide Range)	2	1	1, 2
2. Reactor Coolant Inlet Temperature - T <sub>COLD</sub> (Wide Range)	2	1	1, 2
3. Reactor Coolant Pressure (Wide Range)	2	1	1, 2
4. Pressurizer Water Level	2	1	1, 2
5. Steam Line Pressure	2/Steam Generator	1/Steam Generator	1, 2
6. Steam Generator Water Level (Narrow Range)	2/Steam Generator	1/Steam Generator	1, 2
7. Steam Generator Water Level (Wide Range)	4 (1/Steam Generator)	3 (1/Steam Generator)	1, 2
8. Refueling Water Storage Tank Water Level	2	1	1, 2
9. deleted			
10. Auxiliary Feedwater Flow Rate	4 (1/Steam Generator)	3 (1/Steam Generator)	4, 6
11. Reactor Coolant System Subcooling Margin Monitor	2	1	1, 2
12. PORV Position Indicator	2/valve**	1	1, 2

TABLE 3.3-11 (continued)

TABLE NOTATION

- ACTION 1 With the number of OPERABLE accident monitoring channels less than the Required Number of Channels shown in Table 3.3-11, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 2 With the number of OPERABLE accident monitoring channels less than the MINIMUM Number of Channels shown in Table 3.3-11, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in HOT SHUTDOWN within the next 12 hours.
- ACTION 3 deleted
- ACTION 4 With the number of OPERABLE channels one less than the Required Number of Channels shown in Table 3.3.11, operation may proceed provided that an OPERABLE Steam Generator Wide Range Level channel is available as an alternate means of indication for the Steam Generator with no OPERABLE Auxiliary Feedwater Flow Rate channel.
- ACTION 5 With the number of OPERABLE channels less than the Required Number of Channels show in Table 3.3-11, operation may proceed provided that Steam Tables are available in the Control Room and the following Required Channels shown in Table 3.3-11 are OPERABLE to provide an alternate means of calculating Reactor Coolant System subcooling margin:
- a. Reactor Coolant Outlet Temperature -  $T_{HOT}$   
(Wide Range)
  - b. Reactor Coolant Pressure (Wide Range)



TABLE 4.3-11  
SURVEILLANCE REQUIREMENTS FOR  
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>CHANNEL CHECKS</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. Reactor Coolant Outlet Temperature - T HOT (Wide Range)	M	R	NA
2. Reactor Coolant Inlet Temperature - T COLD (Wide Range)	M	R	NA
3. Reactor Coolant Pressure (Wide Range)	M	R	NA
4. Pressurizer Water Level	M	R	NA
5. Steam Line Pressure	M	R	NA
6. Steam Generator Water Level (Narrow Range)	M	R	NA
7. Steam Generator Water Level (Wide Range)	M	R	NA
8. Refueling Water Storage Tank Water Level	M	R	NA
9. deleted			
10. Auxiliary Feedwater Flow Rate	SU#	R	NA
11. Reactor Coolant System Subcooling Margin Monitor	M	N/A*	NA

-----  
#Auxiliary Feedwater System is used on each startup and flow rate indication is verified at that time.

\*The instruments used to develop RCS subcooling margin are calibrated on an 18 month cycle; the monitor will be compared quarterly with calculated subcooling margin for known input values.



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. 125  
License No. DPR-75

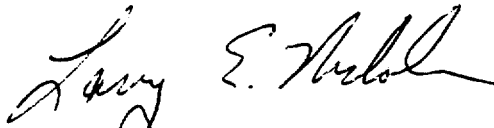
1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated July 19, 1993, and supplemented by letter dated August 5, 1993, 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. 125, 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 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Larry E. Nicholson, Acting Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 16, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 125

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 3-51

3/4 3-51b

3/4 3-52

Insert Pages

3/4 3-51

3/4 3-51b

3/4 3-52

TABLE 3.3-11

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM NO. OF CHANNELS</u>	<u>ACTION</u>
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10. Auxiliary Feedwater Flow Rate	4 (1/Steam Generator)	3 (1/Steam Generator)	4, 6
11. Reactor Coolant System Subcooling Margin Monitor	2	1	1, 2
12. PORV Position Indicator	2/valve**	1	1, 2

TABLE 3.3-11 (continued)

TABLE NOTATION

- ACTION 1 With the number of OPERABLE accident monitoring channels less than the Required Number of Channels shown in Table 3.3-11, restore the inoperable channel(s) to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.
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- ACTION 3 deleted
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(Wide Range)
  - b. Reactor Coolant Pressure (Wide Range)

TABLE 4.3-11  
SURVEILLANCE REQUIREMENTS FOR  
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>CHANNEL CHECKS</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
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3. Reactor Coolant Pressure (Wide Range)	M	R	NA
4. Pressurizer Water Level	M	R	NA
5. Steam Line Pressure	M	R	NA
6. Steam Generator Water Level (Narrow Range)	M	R	NA
7. Steam Generator Water Level (Wide Range)	M	R	NA
8. Refueling Water Storage Tank Water Level	M	R	NA
9. deleted			
10. Auxiliary Feedwater Flow Rate	SU#	R	NA
11. Reactor Coolant System Subcooling Margin Monitor	M	N/A*	NA

-----  
#Auxiliary Feedwater System is used on each startup and flow rate indication is verified at that time.

\*The instruments used to develop RCS subcooling margin are calibrated on an 18 month cycle; the monitor will be compared quarterly with calculated subcooling margin for known input values.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 147 AND 125 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 July 19, 1993, and supplemented by letter dated August 5, 1993, 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 (TS). The requested changes would delete instrument 9, Boric Acid Tank Solution Level, from Tables 3.3-11 and 4.3-11 and the associated Action 3, for Salem Units 1 & 2.

**2.0 EVALUATION**

The Boric Acid Storage Tanks (BAST) are part of the boration subsystem of the Chemical and Volume Control System (CVCS). The BASTs supply concentrated boric acid solution to control the boron concentration in the Reactor Coolant System (RCS). Currently, Technical Specification 3.3.3.7 requires the accident monitoring system instrumentation in Tables 3.3-11 and 4.3-11 to be available for operators to assess and monitor plant conditions following an accident. During a Design Basis Accident (DBA) or transient the boration system is not assumed to be operable to mitigate the consequences of the event. In the event of a malfunction to the CVCS which causes boron dilution, the response is for the operator to close the appropriate valves in the reactor make-up system. The boration subsystem is not assumed to mitigate this event. The BAST level instrumentation is not installed for use in detection or indication of significant degradation of the RCS in the control room.



Regulatory Guide (RG) 1.97 defines/classifies instrumentation as Type A through E depending on the plant variable they monitor and Category I through III depending upon the importance of the variable monitored. All RG 1.97, Type A instruments and Category I, non-type A instruments, in accordance with the unit's RG 1.97 Safety Evaluation Report, are required to be in the Post Accident Monitoring (PAM) section of the technical specifications. Category I, non-Type A, instrumentation is required to assist the operators in minimizing the consequences of accidents and reducing public risk. The BAST level instrumentation is not classified as Type A or Category I and therefore is not required to be in the PAM section of the technical specifications. In addition, NUREG-1431, Standard Westinghouse Technical Specifications specifies PAMTS variables to include all plant-specific variables classified either as Type A or Category I, non-type A.

The operability of the BAST is required by the Reactivity section of the technical specifications. The boron concentration, minimum contained volume, and temperature are verified to ensure the BAST operability. Therefore, elimination of the BAST instrumentation in the PAM section of the technical specifications will not affect the operability of the BAST.

The staff concludes that the proposed changes are consistent with current regulatory requirements. Therefore, the staff concludes that the proposed changes are 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 and change surveillance requirements. 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 (58 FR 46240). 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: J. Zimmerman

Date: November 16, 1993