

March 11, 1991

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: AUXILIARY FEEDWATER PUMPS SURVEILLANCE REQUIREMENTS SALEM
GENERATING STATION, UNIT NOS. 1 AND 2 (TAC NOS. 79367 AND 79368)

The Commission has issued the enclosed Amendment Nos. 119 and 99 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 27, 1990.

These amendments delete the surveillance requirement to verify the flow path from the Auxiliary Feedwater Storage Tank to each steam generator prior to entry into Mode 3 and relocate the locked open valve list from the Surveillance Requirements to the Bases.

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

You are to notify the NRC, in writing, when these amendments have been implemented at Salem 1 and 2.

Sincerely,

James C. Stone

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

Enclosures:

1. Amendment No. 119 to
License No. DPR-70
2. Amendment No. 99 to
License No. DPR-75
3. Safety Evaluation

cc w/enclosures:

See next page

DISTRIBUTION w/enclosures:

Docket File	MO'Brien (2)	JCalvo	SVarga
NRC PDR	OGC	ACRS (10)	WButler
Local PDR	DHagan	JRaleigh	GHill (8)
PDI-2 Reading	JStone	CMcCracken	
GPA/PA	JWhite	RBlough	
OC/LFMB	Wanda Jones	EGreenman	

OFC	:PDI-2/LA	:PDI-2/PM	:OGC	:SPLB/BC	:PDI-2/D
NAME	:MO'Brien	:JStone:rb	:BHolcon	:CMcCracken	:WButler
DATE	2/2/91	2/14/91	2/28/91	2/15/91	3/8/91

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Document Name: (TAC.NOS. 79367/79368)

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

March 11, 1991

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Vice President and Chief Nuclear
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Public Service Electric & Gas Company
Post Office Box 236
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SUBJECT: AUXILIARY FEEDWATER PUMPS SURVEILLANCE REQUIREMENTS SALEM
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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.

You are to notify the NRC, in writing, when these amendments have been implemented at Salem 1 and 2.

Sincerely,

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

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

Enclosures:

1. Amendment No. 119 to
License No. DPR-70
2. Amendment No. 99 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

cc:

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



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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-272

SALEM GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 119
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 December 27, 1990 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. 119, 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

/S/

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 11, 1991

OFC	: PDI-2/A	: PDI-2/PM	: OGC	: PDI-2/D
NAME	: J. Brien	: JStone:rb	: E. Hallen	: WButler
DATE	: 2/14/91	: 2/14/91	: 2/14/91	: 3/8/91

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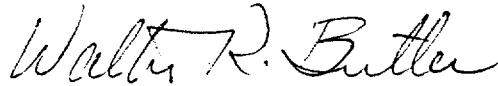
Document Name: [TAC.NOS. 79367/79368]

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 119, 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



Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 11, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 119

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages

3/4 7-6

B 3/4 7-2

Insert Pages

3/4 7-6

B 3/4 7-2

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (continued)

4. Verify the manual maintenance valves in the flow path to each steam generator are locked open.
- b. At least once per 18 months during shutdown by:
 1. Verifying that each automatic valve in the motor driven pump flow path actuates to its correct position on a pump discharge pressure test signal.
 2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of each auxiliary feedwater actuation test signal.

PLANT SYSTEMS

BASES

- U - maximum number of inoperable safety valves per operating steam line
- 109 - Power Range Neutron Flux-High Trip Setpoint for 4 loop operation
- 76 - Maximum percent of RATED THERMAL POWER permissible by P-8 Setpoint for 3 loop operation.
- X - Total relieving capacity of all safety valves per steam line in lbs/hour
- Y - Maximum relieving capacity of any one safety valve in lbs/hour

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss of off-site power.

Each electric driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 440 gpm at a pressure of 1150 psig to the entrance of the steam generators. The steam driven auxiliary feedwater pump is capable of delivering a total feedwater flow of 880 gpm at a pressure of 1150 psig to the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the Residual Heat Removal System may be placed into operation.

The flow path to each steam generator is ensured by maintaining all manual maintenance valves locked open. A spool piece consisting of a length of pipe may be used as an equivalent to a locked open manual valve. The manual valves in the flow path are: 1AF1, 11AF3, 12AF3, 13AF3, 11AF10, 12AF10, 13AF10, 14AF10, 11AF20, 12AF20, 13AF20, 14AF20, 11AF22, 12AF22, 13AF22, 14AF22, 11AF86, 12AF86, 13AF86, and 14AF86.

3/4.7.1.3 AUXILIARY FEED STORAGE TANK

The OPERABILITY of the auxiliary feed storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 8 hours with steam discharge to the atmosphere concurrent with total loss of off-site power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.



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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-311

SALEM GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 99
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 December 27, 1990 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. 99, 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

/S/

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 11, 1991

OFC	: PDI-2/DA	: PDI-2/PM	: OGC	: PDI-2/D
NAME	: M. J. Stone	: J. Stone	: E. Holler	: W. Butler
DATE	: 2/1/91	: 2/14/91	: 2/28/91	: 3/18/91

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Document Name: [TAC.NOS. 79367/79368]

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 99 , 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



Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects - I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 11, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 99

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 7-6

B 3/4 7-2

Insert Pages

3/4 7-6

B 3/4 7-2

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4. Verify the manual maintenance valves in the flow path to each steam generator are locked open.
- b. At least once per 18 months during shutdown by:
 1. Verifying that each automatic valve in the motor driven pump flow path actuates to its correct position on a pump discharge pressure test signal.
 2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of each auxiliary feedwater actuation test signal.

PLANT SYSTEMS

BASES

- U - maximum number of inoperable safety valves per operating steam line
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3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The OPERABILITY of the auxiliary feedwater system ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss of offsite power.

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The flow path to each steam generator is ensured by maintaining all manual maintenance valves locked open. A spool piece consisting of a length of pipe may be used as an equivalent to a locked open manual valve. The manual valves in the flow path are: 2AF1, 21AF3, 22AF3, 23AF3, 21AF10, 22AF10, 23AF10, 24AF10, 21AF20, 22AF20, 23AF20, 24AF20, 21AF22, 22AF22, 23AF22, 24AF22, 21AF86, 22AF86, 23AF86, and 24AF86.

3/4.7.1.3 AUXILIARY FEED STORAGE TANK

The OPERABILITY of the auxiliary feed storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 8 hours with steam discharge to the atmosphere concurrent with total loss of offsite power. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NOS. 119 AND 99 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 GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated December 27, 1990, Public Service Electric & Gas Company (PSE&G) requested an amendment to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit Nos. 1 and 2. The proposed amendments would delete Technical Specification Surveillance Requirement 4.7.1.2.c. This surveillance requires verification of the flow path from the Auxiliary Feedwater Storage Tank to each steam generator before entering Mode 3 following each cold shutdown. Also, the locked open valve list of Surveillance Requirement 4.7.1.2.a.4 would be relocated to the Bases section and a statement added to that section requiring all the manual valves in the flow path to be locked open. A statement would be added to the valve list that a spool piece may be used as an equivalent to a locked open valve.

2.0 EVALUATION

The auxiliary feedwater system at Salem 1 and 2 has two electric motor driven and one turbine driven auxiliary feedwater pumps installed. Technical Specification Surveillance Requirement 4.7.1.2.c requires the auxiliary feedwater system to be demonstrated operable prior to entry to Mode 3 by performing a flow test to verify normal flow paths to each steam generator. Because of the exact wording of the surveillance requirement, i.e., "...verify the normal flow paths from the Auxiliary Feedwater Storage Tank to each of the steam generators.", some questions have been raised about compliance because the turbine driven auxiliary feedwater pump can not be operated prior to entry into Mode 3. PSE&G has proposed to delete this surveillance requirement from the technical specifications. During restart from a cold shutdown condition, Salem 1

and 2 use the motor driven auxiliary feedwater pumps to supply water to the steam generators. This normal operation verifies that flow paths exist from the Auxiliary Feedwater Storage Tank to the steam generators via the motor driven auxiliary feedwater pumps. When sufficient steam pressure is available (greater than 750 psig), the turbine driven auxiliary feedwater pump is tested on recirculation in accordance with the inservice test program. This test of the turbine driven auxiliary feedwater pump verifies flow from the Auxiliary Feedwater Storage Tank through the pump. Also, Technical Specification Section 3.7.1.2 requires the flow paths to be operable. Because there is a requirement in the technical specifications that the flow paths be operable and they are verified during the normal startup sequence, the staff finds this proposed change to delete Technical Specification Surveillance Requirement 4.7.1.2.c acceptable.

Technical Specification Surveillance Requirement Section 4.7.1.2.a.4. contains the list of manually operated, locked open valves in the flow paths to the steam generators. PSE&G has proposed to replace the locked open valve list with the statement, "Verify the manual maintenance valves in the flow path to each steam generator are locked open." The valve list would be placed in the Bases, Section 3/4.7.1.2. along with a statement that "A spool piece consisting of a length of pipe may be used as an equivalent to a locked open manual valve." The proposed change provides the necessary requirement to assure that the valves will be properly positioned, without specifying the individual valves. By including the valves in the Bases, Section 3/4.7.1.2, adequate identification of the valves in the flow path is maintained. The inclusion of the statement, "A spool piece consisting of a length of pipe may be used as an equivalent to a locked open manual valve." will provide some flexibility in the maintenance area. This allowance does not change the requirement to maintain the flow paths to the steam generators. In addition, because the replacement of a valve with a spool piece is a change to the facility as described in the Updated Final Safety Analysis Report, an evaluation in accordance with 10 CFR 50.59 will be performed to assess the safety significance of the action. The staff finds the changes to Technical Specification Section 4.7.1.2.a.4. and Bases Section 3/4.7.1.2 to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The 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. 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.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (56 FR 4872) on February 6, 1991 and consulted with the State of New Jersey. No public comments were received and the State of New Jersey did not have any comments.

The staff 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, and (2) 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 nor to the health and safety of the public.

Dated: March 11, 1991

Principal Contributor: James Stone