

April 8, 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: REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS,
SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2 (TAC NOS.
77827/77828)

The Commission has issued the enclosed Amendment Nos. 123 and 103 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 October 2, 1990.

These amendments modify Technical Specification Table 4.3-1, Reactor Trip System Instrumentation Surveillance Requirements, by adding reference to Note 5 in the Channel Functional Test column for Functional Unit 19. Also, Functional Unit 19 on Table 3.3-1 and 4.3-1 was changed from "Safety Injection Input from SSPS" to "Safety Injection Input from ESF."

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

Sincerely,

/s/

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. 123 to
License No. DPR-70
2. Amendment No. 103 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

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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 requested 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, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 123 to
License No. DPR-70
2. Amendment No. 103 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 NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 123
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 October 2, 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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 123, 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.

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: April 8, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 123

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Pages

3/4 3-4

3/4 3-12

Insert Pages

3/4 3-4

3/4 3-12

TABLE 3.3-1 (Continued)REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NUMBER OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
18. Turbine Trip					
Low Autostop Oil Pressure	3	2	2	1	7#
Turbine Stop Valve Closure	4	4	3	1	6#
19. Safety Injection Input from ESF	2	1	2	1,2	1
20. Reactor Coolant Pump Breaker Position Trip (above P-7)	1/breaker	2	1/breaker per opera- ting loop	1	11
21. Reactor Trip Breakers	2	1	2	1, 2 3*,4*,5*	1###, 14 13
22. Automatic Trip Logic	2	1	2	1, 2 3*,4*,5*	1 13

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
13. Loss of Flow - Two Loops	S	R	N.A.	1
14. Steam Generator Water Level-- Low-Low	S	R	M	1, 2
15. Steam/Feedwater Flow Mismatch & Low Steam Generator Water Level	S	R	M	1, 2
16. Undervoltage - Reactor Coolant Pumps	N.A.	R	M	1
17. Underfrequency - Reactor Coolant Pumps	N.A.	R	M	1
18. Turbine Trip				
A. Low Autostop Oil Pressure	N.A.	N.A.	S/U(1)	1, 2
B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	1, 2
19. Safety Injection Input from ESF	N.A.	N.A.	M(4)(5)	1, 2
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.
21. Reactor Trip Breaker	N.A.	N.A.	S/U(10), M(11,13), SA(12,13) and R(14)	1, 2 and *
22. Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2 and *



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 NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103
License No. DPR-75

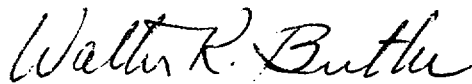
1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated October 2, 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. 103, 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.

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: April 8, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 103

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 3-4

3/4 3-12

Insert Pages

3/4 3-4

3/4 3-12

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NUMBER OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
18. Turbine Trip					
a. Low Autostop Oil Pressure	3	2	2	1	7#
b. Turbine Stop Valve Closure	4	4	4	1	7#
19. Safety Injection Input from ESF	2	1	2	1, 2	1
20. Reactor Coolant Pump Breaker Position Trip (above P-7)	1/breaker	2	1/breaker per opera- ting loop	1	11
21. Reactor Trip Breakers	2	1	2	1, 2 3*, 4*, 5*	1###, 14 13
22. Automatic Trip Logic	2	1	2	1, 2 3*, 4*, 5*	1 13

TABLE 4.3-1 (Continued)REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
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14. Steam Generator Water Level-- Low-Low	S	R	M	1, 2
15. Steam/Feedwater Flow Mismatch & Low Steam Generator Water Level	S	R	M	1, 2
16. Undervoltage - Reactor Coolant Pumps	N.A.	R	M	1
17. Underfrequency - Reactor Coolant Pumps	N.A.	R	M	1
18. Turbine Trip				
a. Low Autostop Oil Pressure	N.A.	N.A.	S/U(1)	N.A.
b. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	N.A.
19. Safety Injection Input from ESF	N.A.	N.A.	M(4)(5)	1, 2
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.
21. Reactor Trip Breaker	N.A.	N.A.	S/U(10), M(11,13), SA(12,13) and R(14)	1, 2 and *
22. Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2 and *



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO SUPPORTING AMENDMENT NOS. 123 AND 103 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, UNITS 1 AND 2
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated October 2, 1990, the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company, Atlantic City Electric Company, (the licensees) submitted a request for changes to the Salem Nuclear Generating Station, Units 1 and 2, Technical Specifications (TS). The request changes the Reactor Trip System instrumentation surveillance requirements by revising the monthly Channel Functional Test interval for Functional Unit 19 (Safety Injection input from SSPS) on Table 4.3-1 of the Salem 1 and 2 Technical Specifications (TS). Editorial changes for Tables 3.3-1 and 4.3-1 were also proposed to change Functional Unit 19 from "Safety Injection Input from SSPS" to "Safety Injection Input from ESF."

2.0 EVALUATION

The current Salem Nuclear Generating Stations, Units 1 and 2 TS require the Safety Injection Input from SSPS to be tested once per month and the manual SSPS input to be tested every 18 months. The purpose of monthly Functional Unit 19 (Safety Injection Input from SSPS) test is to ensure that when the actuation logic for safety injection is satisfied within the Engineered Safety Features Actuation System (ESFAS), a reactor trip signal is also sent (input) to the Reactor Protection System (RPS).

The Salem Nuclear Generating Station TS automatic trip actuation logic channel functional test for RPS and ESFAS is presently performed on a 62-day staggered test basis. The TS requirement for monthly testing of Functional Unit 19 (Safety Injection Input from SSPS) is based on the requirements of a relay-based Reactor Protection System. The Salem

Nuclear Generating Station incorporates a Solid State Protection System (SSPS) which includes reactor trip from safety injection as part of the RPS and ESFAS logic. As stated by the licensee, the current monthly testing requirement for Functional Unit 19 is the only exception to the 62 day staggered test interval. The licensee also stated that the Functional Unit 19 channel functional test is included as part of the automatic trip actuation logic test for RPS and ESFAS. As a result, the monthly testing requirement for Functional Unit 19 essentially requires that an automatic actuation logic test also be performed monthly. The proposed change revises the monthly testing requirement of Functional Unit 19 to be consistent with the 62-day staggered test basis of the automatic actuation logic channel functional test and is acceptable to the staff. The channel functional test for the manual Safety Injection Input from SSPS, also required by Functional Unit 19, will remain at 18 months and is not revised by this TS revision.

The proposed revision of Functional Unit 19 "Safety Injection input from SSPS" to "Safety Injection Input from ESF" is an editorial change that more accurately reflects the ESFAS to reactor trip logic represented by Functional Unit 19 (Tables 3.3-1 and 4.3-1). This change is consistent with the Standard TS and other plant TS reviewed by the staff and is acceptable.

Summary

The proposed revision of Functional Unit 19 Tables 3.3-1 and 4.3-1 reflects the use of a SSPS instead of a relay-based RPS where the safety injection input from ESFAS signal is a discrete input from ESFAS. Functional Unit 19 is part of the RPS logic and the proposed change in the monthly test interval to a 62-day staggered test interval is consistent with the automatic actuation logic test frequency currently specified in Tables 3.3-1 and 4.3-1. Based on the above, the proposed revision of the monthly surveillance test to a 62-day staggered test interval for Functional Unit 19 (Safety Injection Input from ESF) is acceptable to the staff.

The proposed change of Functional Unit 19 to "Safety Injection Input from ESF" from "Safety Injection Input from SSPS" is consistent with the STS and the current RPS/ESFAS testing requirements incorporated into similar plant TS and is acceptable to the staff.

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. 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, and (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 nor to the health and safety of the public.

Principal Contributor: Cliff Douth

Date: April 8, 1991