

January 21, 1994

Docket No. 50-311

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: MAIN FEEDWATER SYSTEM CONTAINMENT ISOLATION, SALEM NUCLEAR
GENERATING STATION, UNIT NO. 2 (TAC NO. M87302)

The Commission has issued the enclosed Amendment No.128 to Facility Operating License No. DPR-75 for the Salem Nuclear Generating Station, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated August 30, 1993.

This amendment changes the main feedwater system containment isolation valves from the feedwater control and control bypass valves to the feedwater stop check valves.

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 this amendment has been implemented at Salem, Unit 2.

Sincerely,
Original signed by:
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.128 to
License No. DPR-75
 2. Safety Evaluation
- cc w/enclosures:
See next page

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

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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

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License No. DPR-75
2. Safety Evaluation

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See next page

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

Salem Nuclear Generating Station,
Units 1 and 2

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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. 50-311

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 128
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, (the licensee) dated August 30, 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:

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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. 128, 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

Charles L. Miller

Charles L. Miller, 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: January 21, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 128

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Pages

3/4 6-15

3/4 6-17

3/4 6-19

3/4 6-20

Insert Pages

3/4 6-15

3/4 6-17

3/4 6-19

3/4 6-20

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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4.6.3.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
- b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
- c. NOT USED
- d. Verifying that on a Containment Purge and Pressure-Vacuum Relief isolation test signal, each Purge and Pressure-Vacuum Relief valve actuates to its isolation position.
- e. Verifying that the Containment Pressure-Vacuum Relief Isolation valves are limited to $\leq 60^\circ$ opening angle.

4.6.3.3 At least once per 18 months, verify that on a main steam isolation test signal, each main steam isolation valve specified in Table 3.6-1 actuates to its isolation position.

4.6.3.4 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

4.6.3.5 Each containment purge isolation valve shall be demonstrated OPERABLE within 24 hours after each closing of the valve, except when the valve is being used for multiple cyclings, then at least once per 72 hours, by verifying that when the measured leakage rate is added to the leakage rates determined pursuant to Specification 4.6.1.2d. for all other Type B and C penetrations, the combined leakage rate is less than or equal to 0.60La.

4.6.3.6 A pressure drop test to identify excessive degradation of resilient valve seals shall be conducted on the:

- a. Containment Purge Supply and Exhaust Isolation Valves at least once per 6 months.
- b. Containment Pressure - Vacuum Relief Isolation Valves at least once per 3 months.

TABLE 3.6-1 (Contd.)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	ISOLATION TIME (Seconds)
D. NOT USED		
E. STEAM GENERATOR BLOWDOWN ISOLATION		
1. 21 GB 4#	Steam Generator Blowdown	≤10 Sec.
2. 22 GB 4#	Steam Generator Blowdown	≤10 Sec.
3. 23 GB 4#	Steam Generator Blowdown	≤10 Sec.
4. 24 GB 4#	Steam Generator Blowdown	≤10 Sec.
5. 21 SS 94#	SG Blowdown Sampling	≤10 Sec.
6. 22 SS 94#	SG Blowdown Sampling	≤10 Sec.
7. 23 SS 94#	SG Blowdown Sampling	≤10 Sec.
8. 24 SS 94#	SG Blowdown Sampling	≤10 Sec.
F. CONTAINMENT PURGE AND PRESSURE - VACUUM RELIEF		
1. 2 VC 1	Purge Supply	≤2 Sec.
2. 2 VC 2	Purge Supply	≤2 Sec.
3. 2 VC 3	Purge Exhaust	≤2 Sec.
4. 2 VC 4	Purge Exhaust	≤2 Sec.
5. 2 VC 5*	Pressure - Vacuum Relief	≤2 Sec.
6. 2 VC 6*	Pressure - Vacuum Relief	≤2 Sec.

TABLE 3.6-1 (Contd.)

CONTAINMENT ISOLATION VALVES

VALVE NUMBER	FUNCTION	ISOLATION TIME (Seconds)
G. MANUAL (Contd.)		
30. 21 SS 181*	Post LOCA Sampling	Not Applicable
31. 21 SS 182*	Post LOCA Sampling	Not Applicable
32. 21 SS 188*	Post LOCA Sampling	Not Applicable
33. 21 SS 189*	Post LOCA Sampling	Not Applicable
34. 23 SS 181*	Post LOCA Sampling	Not Applicable
35. 23 SS 182*	Post LOCA Sampling	Not Applicable
36. 23 SS 184*	Post LOCA Sampling	Not Applicable
37. 23 SS 185*	Post LOCA Sampling	Not Applicable
38. 21 VC 17*	Post LOCA Sampling	Not Applicable
39. 21 VC 18*	Post LOCA Sampling	Not Applicable
40. 21 VC 19*	Post LOCA Sampling	Not Applicable
41. 21 SF 20*	Post LOCA Sampling	Not Applicable
42. 22 VC 17*	Post LOCA Sampling	Not Applicable
43. 22 VC 18*	Post LOCA Sampling	Not Applicable
44. 22 VC 19*	Post LOCA Sampling	Not Applicable
45. 22 VC 20*	Post LOCA Sampling	Not Applicable
46. 21 CS 2+	Containment Spray	Not Applicable
47. 22 CS 2+	Containment Spray	Not Applicable
H. CHECK		
1. 2 CV 74	CVCS-Charging Line	Not Applicable
2. 2 CV 296	CVCS-RCP Seals	Not Applicable
3. 2 CC 119	Component Cooling to RCP	Not Applicable
4. 2 CC 186	Component Cooling to RCP	Not Applicable
5. 2 CC 208	Component Cooling to RCP	Not Applicable
6. 21 CS 48	Containment Spray	Not Applicable
7. 22 CS 48	Containment Spray	Not Applicable
8. 2 DR 30	Demineralized Water System	Not Applicable
9. 2 FP 148	Fire Protection System	Not Applicable
10. 2 NT 26	Pressurizer Relief Tk. - Nitrogen Conn.	Not Applicable
11. 2 NT 34	Accumulator Nitrogen Supply	Not Applicable
12. 2 SA 119	Compressed Air Supply	Not Applicable
13. 2 WR 81	Pressurizer Relief Tank - Primary Water Conn.	Not Applicable
14. 21 CA 360	Instrument Air Supply	Not Applicable
15. 22 CA 360	Instrument Air Supply	Not Applicable
16. 21 BF 22	Main Feedwater	Not Applicable
17. 22 BF 22	Main Feedwater	Not Applicable
18. 23 BF 22	Main Feedwater	Not Applicable
19. 24 BF 22	Main Feedwater	Not Applicable

* May be opened on an intermittent basis under administrative control.

Not subject to Type C leakage tests.

Either valve 2 CV 68 or 2 CV 69 must be OPERABLE.

+ Normally closed motor operated containment isolation valve. Valve opens on Phase B isolation.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 128 TO FACILITY OPERATING LICENSE NO. DPR-75

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

DOCKET NO. 50-311

1.0 INTRODUCTION

By letter dated August 30, 1993, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit No. 2, Technical Specifications (TS). The requested changes would replace the main feedwater control (BF-19s) and main feedwater control bypass (BF-40s) valves with the main feedwater stop check (BF-22s) valves for the containment isolation function in the Table 3.6-1 of the TS.

2.0 BACKGROUND

During the initial licensing of Salem, Unit 2, the licensee identified the stop check valves in the main feedwater system for containment isolation purposes. However, in January 1981, the staff issued Safety Evaluation Report, Supplement 5 (NUREG-0517) that identified a concern with the use of the stop check valves. The main feedwater stop check valves at Salem had local-manual operators. In the event of an accident, environmental and/or radiological conditions could preclude operator access to the local-manual valve operator. If the valves could not be accessed to positively close the valves, the stop check valves then functioned as a simple check valve. General Design Criterion 57 (GDC 57) requires closed systems that penetrate the containment to have at least one containment isolation valve which shall be either automatic, or locked closed, or capable of remote manual operation. GDC 57 further states that a simple check valve may not be used as the automatic isolation valve. Therefore, the design did not meet GDC 57. The licensee, by letter dated August 18, 1981, proposed to install motor operators on the stop check valves with remote-manual operation from the control room or new air/electric valves in the main feedwater system as the means to meet GDC 57. By letter dated September 30, 1981, the staff accepted the licensee's proposal. Motor operators were installed on all main feedwater stop check

valves at both Salem units. However, the technical specifications were not changed to show the stop check valves as the containment isolation valves for the main feedwater system.

When the issue was raised in the 1990 time period, the licensee re-evaluated the suitability of the stop check valves for containment isolation and concluded that the remote-manual closure feature utilized non-safety related controls in the main control room. Design modifications were made to the control circuits to upgrade them to safety related.

3.0 EVALUATION

The containment isolation function, as contained in Table 3.6-1 of the TS, is currently provided by the main feedwater flow control valves and main feedwater flow control bypass valves. These valves automatically close on actuation of the Reactor Trip System (safety injection or reactor trip coincident with low T_{ave}) and/or Engineered Safety Features Actuation System. The proposal to change the containment isolation function to the main feedwater stop check valves will provide the same function without reliance on an actuation signal. Positive closure is assured during all accident scenarios through the remote-manual controls in the main control room.

In a telephone conversation with the licensee's staff on November 10, 1993, it was determined that valves 21 - 24 BF-22 were included in the Inservice Test Program and were also included in the motor operated valve program as requested by Generic Letter 89-10. By including the valves in these programs, there is reasonable assurance that the valves will be adequately maintained. Therefore, the staff concludes that the stop check valves, 21 - 24 BF-22, meet the requirements of GDC 57 and finds the proposed changes acceptable.

Two editorial changes are included: The first adds the word "supply" to the functional description of valve 22CA360 and the second changes "1 CV 68 or 1 CV 69" to "2 CV 68 or 2 CV 69" in the note marked "##" on Page 3/4 6-19. The first change is consistent with the functional description of valve 21CA360 and the second change corrects typographical errors. The staff finds these changes acceptable.

In the note marked "+" on revised Page 3/4 6-19, in the marked up TS pages, the last sentence read "Valves open on Phase B isolation." The original TS had "Valve opens on Phase B isolation." The licensee requested that the original wording be maintained. The staff find this acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 changes surveillance requirements. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 50974). Accordingly, the amendment meets 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 amendment.

6.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Stone

Date: January 21, 1994