

September 10, 1990

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: INADEQUATE CORE COOLING INSTRUMENTATION SYSTEM, SALEM GENERATING
STATION, UNIT NO. 2 (TAC NOS. 74627/71107)

The Commission has issued the enclosed Amendment No. 95 to Facility Operating License No. DPR-75 for the Salem Generating Station, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 23, 1990 and supplemented by letters dated June 28, 1990 and August 8, 1990. The supplemental letters did not increase the scope of the original amendment request and did not affect the staff's original no significant hazards determination.

This amendment modifies the Subcooling Margin Monitor (SMM) Technical Specifications and includes TSs for the Reactor Vessel Level Instrumentation System (RVLIS) with interim requirements. The RVLIS technical specifications include a footnote terminating the applicability of the interim action statement at the end of the Salem Unit 2 6th refueling outage (Fall 1991) when RVLIS will be upgraded. In addition, Tables 3.3-11a and 3.3-11b have been combined into a single table, 3.3-11.

You are requested to notify the Commission, in writing, when the enclosed amendment is implemented at Salem Unit No. 2. In addition, it is requested that you also notify the Commission, in writing, when the RVLIS has been upgraded at Salem Unit 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, Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 95 to License No. DPR-70
2. Safety Evaluation

cc w/enclosures:
See next page

[AMEND 74627/71107]

DISTRIBUTION w/enclosure:

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8/28/90

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

Salem Nuclear Generating Station

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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. 95
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 February 23, 1990, and supplemented by letters dated June 28, 1990, and August 8, 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. 95 , 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 to be implemented within 30 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: September 10, 1990

*See previous concurrence

PDI-2/LA
MO'Brien*
8/16/90

PDI-2/GE
MFranovich*
8/16/90

PDI-2/PM
JStone*
8/16/90

OGC
RBachmann*
8/28/90

PDI-2/D
WButler
9/17/90

LB

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , 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 to be implemented within ~~60~~ days of the date of issuance.

30

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:

PDI-2/IA
M. J. Owen
8/16/90

PDI-2/GE
Pranovich
8/16/90

PDI-2/PM
JStone
8/16/90

OGC
C. C. [unclear]
8/28/90

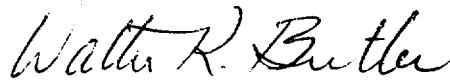
PDI-2/D
WButler
1/90

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 95, 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 to be implemented within 30 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: September 10, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 95

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-50	3/4 3-50
3/4 3-51	3/4 3-51
3/4 3-51a	3/4 3-51a
3/4 3-51b	3/4 3-51b
3/4 3-51c	3/4 3-51c
3/4 3-51d	-
3/4 3-51e	-
3/4 3-52a	3/4 3-52a

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

- 3.3.3.7 The accident monitoring instrumentation channels shown in Table 3.3-11 shall be operable.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. As shown in Table 3.3-11.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

- 4.3.3.7 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK AND CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-11.

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>
1. Reactor Coolant Outlet Temperature - T _{HOT} (Wide Range)	2	1	1, 2
2. Reactor Coolant Inlet Temperature - T _{COLD} (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. Boric Acid Tank Solution Level	2 (1/tank)	1 (1/tank)	3
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)

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM NO. OF CHANNELS</u>	<u>ACTION</u>
13. PORV Block Valve Position Indicator	2/valve**	1	1, 2
14. Pressurizer Safety Valve Position Indicator	2/valve**	1	1, 2
15. Containment Pressure - Narrow Range	2	1	1, 2
16. Containment Pressure - Wide Range	2	1	7, 2
17. Containment Water Level - Wide Range	2	1	7, 2
18. Core Exit Thermocouples	4/core quadrant	2/core quadrant	1, 2
19. Reactor Vessel Level Instrumentation System (RVLIS)	2	1	8*** 1, 2

(**) Total number of channels is considered to be two (2) with one (1) of the channels being any one (1) of the following alternate means of determining PORV, PORV Block, or Safety Valve position: Tailpipe Temperatures for the valves, Pressurizer Relief Tank Temperature Pressurizer Relief Tank Level OPERABLE.

(***) Action 8 remains in effect until startup from the 6th refueling outage at which time, PSE&G will install the upgraded RVLIS. Upon expiration, Actions 1 and 2 will apply.

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 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 the Boric Acid Tank associated with the remaining OPERABLE channel satisfies all requirements of Specification 3.1.2.8.a.
- ACTION 4 With the number of OPERABLE channels one less than the Required Number of Channels shown in Table 3.3-11, operations 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 shown 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 NOTATION

- ACTION 6 With the number of OPERABLE channels less than the Minimum 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 7 With the number of OPERABLE channels one less than the Required Number of Channels shown in Table 3.3-11, operation may proceed until the next CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN).
- ACTION 8 With the number of OPERABLE channels one less than the Required or Minimum number of channels shown in Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or:
1. Operation may proceed provided the Required Channels shown in Table 3.3-11 for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples are OPERABLE. With the number of OPERABLE channels for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples shown in Table 3.3-11 less than the Required Number of Channels, follow the associated Action Statement, and
 2. Restore the system to OPERABLE status at the next scheduled CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN).

TABLE 4.3-11 (Continued)
SURVEILLANCE REQUIREMENTS FOR
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
12. PORV Position Indicator	M	NA	Q
13. PORV Block Valve Position Indicator	M	NA	Q
14. Pressurizer Safety Valve Position Indicator	M	NA	R
15. Containment Pressure - Narrow Range	M	NA	NA
16. Containment Pressure - Wide Range	M	R	NA
17. Containment Water Level - Wide Range	M	R	NA
18. Core Exit Thermocouples	M	R	NA
19. Reactor Vessel Level Instrumentation System (RVLIS)	M	R	NA



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 95 TO FACILITY OPERATING LICENSE NO. DRP-75

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

SALEM GENERATING STATION, UNIT NO. 2

DOCKET NO. 50-311

1.0 INTRODUCTION

By letter dated February 23, 1990, and supplemented by letters dated June 28, 1990, and August 8, 1990 Public Service Electric & Gas Company requested an amendment to Facility Operating License No. DPR-75 for the Salem Generating Station, Unit No. 2. The proposed amendment would modify the Technical Specifications (TSs) for the Subcooling Margin Monitor (SMM) and change the TSs for Reactor Vessel Level Instrumentation System (RVLIS) with interim requirements until RVLIS is upgraded. In addition, Tables 3.3-11a and 3.3-11b have been combined into a table, 3.3-11. The June 28, 1990 and August 8, 1990 supplemental letters did not increase the scope of the original amendment request and did not affect the staff's original no significant hazards determination.

2.0 EVALUATION

These proposed changes will add specifications for instrumentation dealing with inadequate core cooling to provide assurance that the RVLIS and SMM equipment installed at the facility are operated and maintained within acceptable limits. This proposed change is in response to NUREG-0737, Technical Specifications guidance provided in NRC Generic Letter 83-37 and an additional request (Varga to Uderitz, dated November 17, 1983) for Technical Specifications for Inadequate Core Cooling (ICC) instrumentation. Until the RVLIS can be upgraded, an interim Action Statement is being proposed to eliminate the need for two separate License Change Requests.

In response to the staff's evaluation issued on October 31, 1989, the licensee has revised the SMM installation schedule for Salem Unit 2 to coincide with the Spring 1990 outage and submitted changes to the Technical Specifications for RVLIS to provide interim requirements with a footnote to terminate applicability of this interim action at the end of the appropriate refueling outage when the RVLIS is upgraded. The RVLIS upgrade will be completed during the Salem Unit 2 6th refueling outage (Fall 1991).

The licensee has incorporated SMM and RVLIS into Table 3.3-11 Accident Monitoring Instrumentation and Table 4.3-11 Surveillance Requirements for Accident Monitoring Instrumentation for Salem Unit 2 Technical Specifications. Regarding the Action Statements for Item 11 SMM and Item 19 RVLIS in TS Table 3.3-11, the licensee has proposed to reference Action Statements 1 and 2 for SMM and RVLIS. However, an additional Action Statement 8 is being added to Table 3.3-11 Notations and is referenced in Item 19, RVLIS, of Table 3.3-11. The reference to Action Statement 8 in Table 3.3-11, Item 19, RVLIS, also has a "****" footnote associated with it. These Action Statements are given as follows:

- 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 8 With the number of OPERABLE Channels one less than the Required or Minimum number of channels shown in Table 3.3-11, either restore the inoperable channel(s) to OPERABLE status within 48 hours or:
1. Operation may proceed provided the Required Channels shown in Table 3.3-11 for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples are OPERABLE. With the number of OPERABLE channels for the Reactor Coolant System Subcooling Margin Monitor and the Core Exit Thermocouples shown in Table 3.3-11 less than the Required Number of Channels, follow the associated Action Statement, and
 2. Restore the system to OPERABLE status at the next scheduled CHANNEL CALIBRATION (which shall be performed upon the next entry into MODE 5, COLD SHUTDOWN).

The "****" footnote associated with Table 3.3-11, Item 19 RVLIS, is as follows:

(***) Action 8 remains in effect until startup from the 6th refueling outage for Unit 2 at which time, PSE&G will install the upgraded RVLIS. Upon expiration, Actions 1 and 2 will apply.

We have reviewed these proposed Technical Specifications for SMM and RVLIS and our findings follow:

- (1) The Action Statements 1 and 2 are acceptable because they are consistent with the GL 83-37 guidance.
- (2) The proposed implementation date (Spring 1990) for Salem Unit 2 SMM Technical Specification is acceptable. The proposed Action Statements for Salem SMM Unit 2 are fully in compliance with the GL 83-37 guidance, and are therefore also acceptable.

- (3) The proposed Technical Specification for Salem Unit 2 RVLIS with Action Statements 1, 2, and 8 with "****" is acceptable because the GL 83-37 guidance cannot be met until the RVLIS is upgraded (Fall 1991).

The staff has reviewed the Salem licensee's proposal for SMM and RVLIS Technical Specification revisions in Tables 3.3-11 and 4.3-11 and has found it acceptable. The staff would require the licensee to inform us of the completion of the RVLIS upgrade.

The June 28, 1990 supplement clarified the original February 23, 1990 amendment request. The "Description of Change" section of the original submittal proposed that Salem Unit No. 1 TSs Tables 3.3-11a and 3.3-11b be combined into a single table. As indicated by the original license amendment request's revised TSs pages, PSE&G intended that Salem Unit No. 2 Tables 3.3-11a and 3.3-11b should also be combined. The supplemental letter explicitly states that the amendment request for combining TSs Tables 3.3-11a and 3.3-11b is also for Salem Unit No. 2. By combining the Tables, Salem Unit 2 is in conformance with the Westinghouse Standard Technical Specifications. The staff finds this acceptable.

The August 8, 1990 supplement corrected minor differences between the revised technical specification pages contained in the original request and the current Technical Specifications. These differences were outside the areas of the proposed revisions. These differences are: In the ** footnote of Table 3.3-11, the phrase "means for determining" should have been "means of determining" and the word "Operable" was changed to all caps. In Table 3.3-11, Item 16, Containment Pressure-Wide Range, the reference to Action 1,2 should have been 7,2. In Table 3.3-11, Action 4, a typographical error in the word "OPERABLE" was corrected. The staff finds these corrections acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves 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 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (55 FR 21979) on May 30, 1990 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 this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor:

T. Huang

Dated: September 10, 1990