

January 29, 1998

Mr. Leon R. Eliason
Chief Nuclear Officer & President-
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2, ISSUANCE OF
AMENDMENTS RE: HYDROGEN ANALYZER CALIBRATION FREQUENCY
(TAC NOS. M99873 AND M99874)

Dear Mr. Eliason:

The Commission has issued the enclosed Amendment Nos. 204 and 186 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 24, 1997.

These amendments revise the containment hydrogen analyzer surveillance requirements of
TS 4.6.4.1 to increase the calibration frequency from once per refueling outage to quarterly.

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/

Patrick D. Milano, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/311

- Enclosures: 1. Amendment No. 204 to
License No. DPR-70
2. Amendment No. 186 to
License No. DPR-75
3. Safety Evaluation

cc w/encs: See next page

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

January 29, 1998

Mr. Leon R. Eliason
Chief Nuclear Officer & President-
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

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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 black ink, appearing to read "Patrick D. Milano", is written over a horizontal line.

Patrick D. Milano, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-272/311

Enclosures: 1. Amendment No. ²⁰⁴to
License No. DPR-70
2. Amendment No. ¹⁸⁶to
License No. DPR-75
3. Safety Evaluation

cc w/encls: See next page

Mr. Leon R. Eliason
Public Service Electric & Gas
Company

cc:

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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. 50-272

SALEM NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

**Amendment No. 204
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 24, 1997, 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. 204, 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



John F. Stolz, 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 29, 1998

ATTACHMENT TO LICENSE AMENDMENT NO.204

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Page

3/4 6-18

Insert Page

3/4 6-18

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 92 days, and at least once per 92 days by performing a CHANNEL CALIBRATION using sample gases containing:

- a. Two volume percent hydrogen (low span), balance Nitrogen, and
- b. Six volume percent hydrogen (high span), balance Nitrogen.



**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. 186
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 24, 1997, 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. 186, 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



John F. Stolz, 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 29, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 186

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Page

3/4 6-21

Insert Page

3/4 6-21

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN ANALYZERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen analyzers shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

With one hydrogen analyzer inoperable, restore the inoperable analyzer to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

With both hydrogen analyzers inoperable, restore at least one analyzer to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen analyzer shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK at least once per 12 hours, a CHANNEL FUNCTIONAL TEST at least once per 92 days, and at least once per 92 days by performing a CHANNEL CALIBRATION using sample gas containing:

- a. Two volume percent hydrogen (low span), balance Nitrogen, and
- b. Six volume percent hydrogen (high span), balance Nitrogen.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 204 AND 186 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 October 24, 1997, 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 (TSs). The requested changes would revise the hydrogen analyzer surveillance requirements in TS 4.6.4.1 to increase the calibration frequency from once per refueling outage to quarterly.

2.0 EVALUATION

The hydrogen analyzers are part of the Containment Hydrogen Monitoring System and provide the measurement of hydrogen concentration at two sample locations. Hydrogen analyzers are used after a loss-of-coolant accident to determine when to start the hydrogen recombiners. Hydrogen concentration is measured by a hydrogen partial pressure sensor in conjunction with a total pressure sensor. The partial pressure sensor is galvanic in nature, consisting of a platinum black electrode and a platinum oxide counter electrode within a polysulfone housing. The output of the analyzers provides indication and alarm functions in the control room.

In NRC Generic Letter (GL) 93-05, "Line Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," dated September 27, 1993, the NRC informed licensees that, as part of its effort on the Technical Specifications Improvement Program, it had performed an examination of surveillance requirements that require testing during power operation. The NRC staff found that a small fraction of the TS surveillance intervals warranted relaxation and proposed guidance for implementing the line-item TSs improvements to reduce testing during power operation. Specifically, in Section 5.4 of enclosure 1 to GL 93-05,

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the staff recommended that the frequency for calibration of the hydrogen monitors could be changed to once each refueling interval. The staff also indicated that licensees should not extend any surveillance interval if the recommendations were not compatible with plant operating experience.

In a letter dated May 3, 1994, the licensee applied for changes to the Salem Unit Nos. 1 and 2 TSs on the basis of GL 93-05 to revise, in part, the surveillance frequencies for the combustion gas control system. In this application, the licensee stated that the operating experience at Salem was compatible with the requested change. In amendments nos. 153 and 134 dated July 27, 1994, the NRC staff issued revisions to the Salem Unit Nos. 1 and 2 TS, respectively, that reduced the surveillance frequency requirement for the channel calibrations of the hydrogen analyzers. These amendments changed the calibration frequency from quarterly to once per refueling outage.

On May 14, 1997, the licensee informed the NRC staff that it had not considered the manufacturer's recommendation for calibration frequency when applying for the changes to the channel calibration frequency for the hydrogen analyzers. In addition to administratively imposing a return to the quarterly frequency, the licensee committed to revise the frequency in TS 4.6.4.1. On the basis of this commitment, the licensee submitted its application in a letter dated October 24, 1997, to return the TS calibration frequency to quarterly.

The proposed revisions return the channel calibration frequency to the value recommended by the instrument manufacturer, and the proposed frequency is more restrictive than the current surveillance requirement. The quarterly calibration frequency will provide an earlier and more frequent indication of the system status and will increase the probability that the system will perform in accordance with design function. Therefore, the NRC staff finds the changes to be 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 (62 FR 66140). 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: P. Milano

Date: January 29, 1998