

May 2, 1989

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: RESIDUAL HEAT REMOVAL SYTSEM AUTOCLOSURE INTERLOCK  
(TAC NOS. 71779/71780)

RE: SALEM GENERATING STATION, UNIT NOS. 1 AND 2

The Commission has issued the enclosed Amendment Nos. 95 and 71 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 20, 1988 and supplemented on March 3, 1989, to provide clarifications.

These amendments delete the requirements for the Residual Heat Removal System autoclosure interlock.

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. Amendment No. 71 to License No. DPR-75
3. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION w/enclosures:

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|--------------------|--------------|------------------|---------------|
| <u>Docket File</u> | MO'Brien (2) | Wanda Jones      | Brent Clayton |
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| Local PDR          | DHagan       | GSchwenk         | WHodges       |
| PDI-2 Reading      | EJordan      | ACRS (10)        |               |
| WButler            | BGrimes      | CMiles, GPA/PA   |               |
| JStone/MThadani    | TMeek (8)    | RDiggs, ARM/LFMB |               |

[MILTENBERGER]

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WButler  
4/17/89

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PDI-2/PM  
JStone:tr  
4/17/89

OGC  
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WButler  
5/12/89

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

May 2, 1989

Docket Nos. 50-272/311

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Public Service Electric & Gas Company  
Post Office Box 236  
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RE: SALEM GENERATING STATION, UNIT NOS. 1 AND 2

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These amendments delete the requirements for the Residual Heat Removal System autoclosure interlock.

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 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. 95 to  
License No. DPR-70
2. Amendment No. 71 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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General Manager - Salem Operations  
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Lower Alloways Creek Township  
c/o Mary O. Henderson, Clerk  
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Hancocks Bridge, NJ 08038

Mr. S. LaBruna  
Vice President - Nuclear Operations  
Nuclear Department  
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Hancocks Bridge, New Jersey 08038

Mr. Bruce A. Preston, Manager  
Licensing and Regulation  
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Hancocks Bridge, NJ 08038

Robert Traee, Mayor  
Lower Alloways Creek Township  
Municipal Hall  
Hancocks Bridge, NJ 08038

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Assistant Consumer Advocate  
Office of Consumer Advocate  
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Harrisburg, PA 17120

Kathy Halvey Gibson, Resident Inspector  
Salem Nuclear Generating Station  
U.S. Nuclear Regulatory Commission  
Drawer I  
Hancocks Bridge, NJ 08038

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Deputy Attorney General  
Department of Law and Public Safety  
CN-112  
State House Annex  
Trenton, NJ 08625

Delmarva Power & Light Company  
c/o Jack Urban  
General Manager, Fuel Supply  
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P.O. Box 231  
Wilmington, DE 19899

Mr. David M. Scott, Chief  
Bureau of Nuclear Engineering  
Department of Environmental Protection  
State of New Jersey  
CN 411  
Trenton, NJ 08625



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. 95  
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 20, 1988 and supplemented on March 3, 1989 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. 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 startup from the eighth refueling outage scheduled to end in May 1989.

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: May 2, 1989

PDI-2/D  
M...ien  
4/17/89

PDI-2/PM  
JStone:tr  
H/17/89

OGC  
B...  
4/21/89

PDI-2/D  
WButler  
5/2/89

WB

(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 startup from the eighth refueling outage scheduled to end in May 1989.

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: May 2, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 95

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Page

3/4 5-5b

Insert Page

3/4 5-5b

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- i. The automatic interlock function of the RHR System shall be verified within the seven (7) days prior to placing the RHR System in service for cooling of the Reactor Coolant System. This shall be done by verifying with a test signal corresponding to a reactor coolant pressure of 580 psig or greater, that the 1RH1 and 1RH2 valves cannot be opened.



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. 71  
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 20, 1988 and supplemented on March 3, 1989 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. 71, 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 startup from the fifth refueling outage currently scheduled for March 1990.

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: May 2, 1989

PDI-2/PLA  
MBrien  
4/17/89

PDI-2/PM  
JStone:tr  
4/17/89

OGC  
Bromberg  
4/21/89

PDI-2/D  
WButler  
5/12/89

W

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 71, 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 startup from the fifth refueling outage currently scheduled for March 1990.

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: May 2, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 71

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Page

3/4 5-6a

Insert Page

3/4 5-6a

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

---

- i. The automatic interlock function of the RHR System shall be verified within the seven (7) days prior to placing the RHR System in service for cooling of the Reactor Coolant System. This shall be done by verifying with a test signal corresponding to a reactor coolant pressure of 580 psig or greater, that the 2RH1 and 2RH2 valves cannot be opened.

\*(Footnote from page 3/4 5-6)

Flow balance testing pursuant to Specification 4.5.2.h shall be performed the first time the unit is in COLD SHUTDOWN after December 15, 1981.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NOS. 95 AND 71 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 20, 1988 and supplemented on March 3, 1989 (Refs. 1 & 2), Public Service Electric & Gas Company 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 the Autoclosure Interlock (ACI) function of the Residual Heat Removal System (RHR). The staff review of this issue has focused on assuring that the changes proposed for Salem 1 and 2 meet the staff position on the removal of the autoclosure interlock as set forth in the staff's safety evaluation for Diablo Canyon (Ref. 3). The information supplied in the March 3, 1989 supplement provided clarification of the original submittal.

2.0 EVALUATION

The staff position taken on removal ACI at Diablo Canyon consisted of hardware changes and procedural/enhancements which the staff believes will produce a net safety benefit compared to the current plant arrangement. The hardware changes consist of the addition of an alarm to each RHR suction valve. The alarm actuates if the valve is open and the pressure is greater than the open permissive setpoint and less than the RHR design pressure minus the RHR pump head pressure. The open permissive which prevents these valves from being opened must be left in place and not be disabled by the addition of the alarm and the removal of the ACI circuitry. The valve position indicator to the alarm must not be affected by power lockout of the valves and a method, independent of the alarm, for determining valve position should be available in the control room following power lockout of the RHR suction valves. The procedural modifications required are as follows:

1. The alarm response procedure used during plant startup should be modified to reflect alarm recognition responses for the added alarm. The procedure should be revised to direct the operator to take the necessary actions to close the open RHR suction valve(s), if they are not closed following alarm actuation. If this is not possible, the operator should be instructed to not pressurize further and to return to the safe shutdown mode of operation.
2. A Surveillance procedure for the RHR suction valve alarms is added to ensure these alarms remain operable.
3. A method, independent of the alarm, should be used to ensure that these valves are closed when the power to these valves is locked out. For example, the valves could be leak-checked after power lockout.

Beside the hardware and procedural changes described above, Diablo Canyon and Salem were requested to review the sizing of the valve operators on the RHR suction valves to ensure that it would be unlikely that these valves could be opened against full system pressure. This provides still another level of protection to ensure the integrity of the high/low pressure system interface.

The staff has reviewed the Salem submittal (Refs. 1 & 2) and has found that their proposed changes meet the hardware and procedural modifications described above which have been previously approved by the staff for Diablo Canyon and are therefore 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 (54 FR 6206) on February 8, 1989 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.

Principal Contributor: G. Schwenk

Dated: May 2, 1989

5.0 REFERENCES

1. Letter, Steven E. Miltenberger (Public Service Electric & Gas) to USNRC, dated December 20, 1988.
2. Letter, Steven E. Miltenberger (Public Service Electric & Gas) to USNRC, dated March 3, 1989.
3. Letter, Harry Rood (NRC) to J. D. Shiffer (Pacific Gas & Electric), dated February 17, 1988.
4. NUREG-1269, "Loss of Residual Heat Removal at Diablo Canyon, Unit 2."