



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. 115  
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 24, 1987, and supplemented by letters dated February 26, 1990, June 20, 1990, June 28, 1990 and September 19, 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. 115, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Walter R. Butler, Director  
Project Directorate 1-2  
Division of Reactor Projects - 1/11

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 13, 1990

PDI-2/LA  
MO'Brien  
10/18/90

PDI-2/GE  
JRaleigh  
10/23/90

*JW*  
PDI-2/PM  
JStone  
10/18/90

OGC  
*CB*  
10/30/90

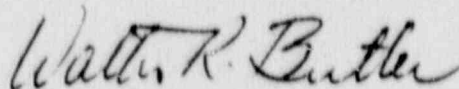
PDI-2/D  
WButler  
11/9/90

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 115, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director  
Project Directorate 1-2  
Division of Reactor Projects - 1/11

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 13, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 115

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

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### 3/4.3.4 TURBINE OVERSPEED PROTECTION

#### LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to the OPERABLE status within 72 hours or close at least one valve in the affected steam lead; otherwise, isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours either restore the system to OPERABLE status or isolate the turbine from the steam supply.

#### SURVEILLANCE REQUIREMENTS

- 4.3.4.1 The provisions of Specification 4.0.4 are not applicable.
- 4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE; (1) prior to admitting steam to the turbine during each startup unless performed within the past 7 days, (2) within 24 hours of attaining greater than or equal to 85% of RATED THERMAL POWER, and (3) at a frequency not to exceed one year\* by direct observation of the movement of each of the following valves through at least one complete cycle from the running position.
  - a. Four high pressure turbine stop valves.
  - b. Four high pressure turbine control valves.
  - c. Six low pressure hot reheat stop valves.
  - d. Six low pressure hot reheat intercept valves.

\* The above valves are to be tested at a frequency consistent with the methodology presented in WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency", and in accordance with the established NRC acceptance criteria for the probability of a missile ejection incident of  $1.0 \times 10^{-5}$  per year, in no case shall the test interval for the above valves exceed one year.

INSTRUMENTATION

SURVEILLANCE REQUIREMENTS (Continued)

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- 4.3.4.3 The above required turbine overspeed protection system shall be demonstrated OPERABLE:
- a. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.
  - b. At least one per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion. If unacceptable flaws or excessive corrosion are found, all other valves of that type shall be inspected.
- 4.3.4.4 Verify the test frequency maintains the probability of a missile ejection incident within NRC guidelines by reviewing the methodology presented in WCAP-11525:
- a. At least once every two refueling outages.
  - b. After modifications to the main turbine or turbine overspeed protection valves.



**BASES**

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**3/4.3.4 TURBINE OVERSPEED PROTECTION**

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety-related components, equipment or structures.

To prevent double shocking the turbine, valve testing is not required when steam is being admitted to the turbine and THERMAL POWER is less than 85% of RATED THERMAL POWER, provided the valves are tested prior to startup and within 24 hours of attaining 85% of RATED THERMAL POWER.

During normal operation, turbine valve testing is performed at a frequency consistent with the methodology presented in WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Frequency." This report evaluates the contribution of failure or unavailability of the turbine valve safety function to the probability that the turbine will overspeed and eject a missile. It concludes that extended intervals between turbine valve functional tests can be achieved without exceeding the NRC acceptance criteria for the probability of a turbine missile ejection incident. Factors which affect the selected valve test interval include low pressure turbine rotor type and inspection interval; turbine valve type, arrangement and overspeed controls; and secondary side water chemistry.



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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. 97  
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 24, 1987, and supplemented by letters dated February 26, 1990, June 20, 1990, June 28, 1990 and September 19, 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. 97, 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.

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: November 13, 1990

PDI-2/LA  
MO'Brien  
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PDI-2/PM  
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OGC  
10/30/90

PDI-2/D  
WButler  
11/9/90

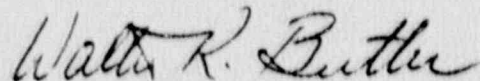


(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 97, 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.

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: November 13, 1990



ATTACHMENT TO LICENSE AMENDMENT NO. 97  
FACILITY OPERATING LICENSE NO. DPR-75  
DOCKET NO. 50-311

Revise Appendix A as follows:

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## INSTRUMENTATION

### 3/4.3.4 TURBINE OVERSPEED PROTECTION

#### LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

#### ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to the OPERABLE status within 72 hours or close at least one valve in the affected steam lead; otherwise, isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours either restore the system to OPERABLE status or isolate the turbine from the steam supply.

#### SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE; (1) prior to admitting steam to the turbine during each startup unless performed within the past 7 days, (2) within 24 hours of attaining greater than or equal to 85% of RATED THERMAL POWER, and (3) at a frequency not to exceed one year\* by direct observation of the movement of each of the following valves through at least one complete cycle from the running position.

- a. Four high pressure turbine stop valves.
- b. Four high pressure turbine control valves.
- c. Six low pressure hot reheat stop valves.
- d. Six low pressure hot reheat intercept valves.

\* The above valves are to be tested at a frequency consistent with the methodology presented in WCAP-11525, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency", and in accordance with the established NRC acceptance criteria for the probability of a missile ejection incident of  $1.0 \times 10^{-5}$  per year, in no case shall the test interval for the above valves exceed one year.

## INSTRUMENTATION

### SURVEILLANCE REQUIREMENTS (Continued)

4.3.4.3 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

- a. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.
- b. At least one per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion. If unacceptable flaws or excessive corrosion are found, all other valves of that type shall be inspected.

4.3.4.4 Verify the test frequency maintains the probability of a missile ejection incident within NRC guidelines by reviewing the methodology presented in WCAP-11525:

- a. At least once every two refueling outages.
- b. After modifications to the main turbine or turbine overspeed protection valves



## INSTRUMENTATION

### BASES

#### 3/4.3.3.8 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50. The purpose of tank level indicating devices is to assure the detection and control of leaks that if not controlled could potentially result in the transport of radioactive materials to UNRESTRICTED AREAS.

#### 3/4.3.3.9 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments shall be calculated and adjusted in accordance with the procedures in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring (and controlling) the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

#### 3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety-related components, equipment or structures.

To prevent double shocking the turbine, valve testing is not required when steam is being admitted to the turbine and THERMAL POWER is less than 85% of RATED THERMAL POWER, provided the valves are tested prior to startup and within 24 hours of attaining 85% of RATED THERMAL POWER.



## INSTRUMENTATION

### BASES

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During normal power operation, turbine valve testing is performed at a frequency consistent with the methodology presented in WCAP-11515, "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency." This report evaluates the contribution of failure or unavailability of the turbine valve safety function to the probability that the turbine will overspeed and eject a missile. It concludes that extended intervals between turbine valve functional tests can be achieved without exceeding the NRC acceptance criteria for the probability of a turbine missile ejection incident. Factors which affect the selected valve test interval include low pressure turbine rotor type and inspection interval; turbine valve type, arrangement and overspeed control; and secondary side water chemistry.