



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

PHILADELPHIA ELECTRIC COMPANY  
PUBLIC SERVICE ELECTRIC AND GAS COMPANY  
DELMARVA POWER AND LIGHT COMPANY  
ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-277

PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 103  
License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company, et al. (the licensee) dated April 12, 1984, 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;
  - 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-44 is hereby amended to read as follows:

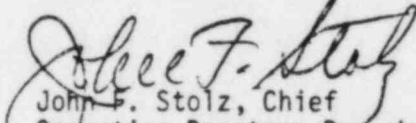
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Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 103, are hereby incorporated in the license. PECO 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, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 9, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 103

FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove

218

218a

224

Insert

218

218a

224

LIMITING CONDITIONS FOR OPERATION3.9 AUXILIARY ELECTRICAL SYSTEMApplicability:

Applies to the auxiliary electrical power system.

Objective:

To assure an adequate supply of electrical power for operation of those systems required for safety.

Specification:A. Auxiliary Electrical Equipment

The reactor shall not be made critical unless all of the following conditions are satisfied:

1. Both off-site sources and the startup transformers and emergency transformers are available and capable of automatically supplying power to the 4kV emergency buses.
2. The four diesel generators shall be operable and there shall be a minimum of 104,000 gal. of diesel fuel on site.
3. The 4kV emergency buses and the 480V emergency load centers are energized.
4. The four unit 125V batteries and their chargers shall be operable.

SURVEILLANCE REQUIREMENTS4.9 AUXILIARY ELECTRICAL SYSTEMApplicability:

Applies to the periodic testing requirements of the auxiliary electrical systems.

Objective:

Verify the operability of the auxiliary electrical system.

Specification:A. Auxiliary Electrical Equipment1. Diesel Generators

- a. Each diesel generator shall be manually started and loaded once each month to demonstrate operational readiness. The test shall continue for at least a one hour period at rated load.

During the monthly generator test the diesel generator starting air compressor shall be checked for operation and its ability to recharge air receivers. The operation of the diesel fuel oil transfer pumps shall be demonstrated, and the diesel starting time to reach rated voltage and frequency shall be logged.

LIMITING CONDITIONS FOR OPERATION  
3.9.ASURVEILLANCE REQUIREMENTS  
4.9.A (Cont'd)

- b. Once per operating cycle the condition under which the diesel generator is required will be simulated and a test conducted to demonstrate that it will start and accept the emergency load within the specified time sequence. The results shall be logged.
- c. Once a month the quantity of diesel fuel available shall be logged.
- d. Once a month a sample of diesel fuel shall be checked for quality. The quality shall be within the acceptable limits specified in Table 1 of ASTM D975-68 and logged.
- e. Each diesel generator shall be given an annual inspection in accordance with instructions based on the manufacturer's recommendations.

## 2. Unit Batteries

- a. Every week the specific gravity, the voltage and temperature of the pilot cell and overall battery voltage shall be measured and logged.
- b. Every three months the measurements shall be made of voltage of each cell to nearest 0.1 Volt, specific gravity of each cell, and temperature of every fifth cell. These measurements shall be logged.
- c. The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outage. In lieu of the performance test every third refueling outage, any battery that shows "signs of degradation or has reached 85% of its service life" shall be subjected to an annual performance test.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

3.9.A.

4.9.A (Cont'd)

The service test need not be performed on the refueling outage during which the performance test was conducted. The specific gravity and voltage of each cell shall be determined after the discharge and logged.

## 3. Swing Buses

- a. Every two months the swing buses supplying power to the Low Pressure Coolant Injection System (LPCIS) valves shall be tested to assure that the transfer circuits operate as designed.

### 3.9 BASES (Cont'd.)

The 125-Volt battery system shall have a minimum of 105 Volts at the battery terminals to be considered operable. The 250-Volt portion of the 125/250-Volt battery system shall have a minimum of 210 Volts at the battery terminals to be considered operable.

The ESWS has two 100 per cent cooling capacity pumps, each powered from a separate standby power supply. A third pump equivalent to the two ESW pumps, the Emergency Cooling Water pump, is located at the Emergency Cooling Tower. This latter pump requires the operability of one of the two ESW booster pumps and two of the three Emergency Cooling Tower fans to function adequately. In the event 2 pumps are inoperable, the allowable repair period is conservative in view of the 3-month test interval for the system.

### 4.9 BASES

The monthly test of the diesel generator is conducted to check for equipment failures and deterioration. Testing is conducted up to equilibrium operating conditions to demonstrate proper operation at these conditions. The diesel generator will be manually started, synchronized and connected to the bus and load picked up. The diesel generator should be loaded to at least 75% of rated load to prevent fouling of the engine. It is expected that the diesel generator will be run for one to two hours. Diesel generator experience at other generating stations indicates that the testing frequency is adequate and provides a high reliability of operation should the system be required.

Each diesel generator has one air compressor and two air receivers for starting. It is expected that the air compressors will run only infrequently. During the monthly check of the diesel generator, one receiver in each set of receivers will be drawn down below the point at which the corresponding compressor automatically starts to check operation and the ability of the compressors to recharge the receivers.

The diesel generator fuel consumption rate at full load is approximately 200 gallons per hour. Thus, the monthly load test of the diesel generators will test the operation and the ability of the fuel oil transfer pumps to refill the day tank and will check the operation of these pumps from the emergency source.

The test of the diesel generator during the refueling outage will be more comprehensive in that it will functionally test the system; i.e., it will check diesel generator starting and closure of diesel generator breaker and sequencing of load on the diesel generator. The diesel generator will be started by simulation of a loss-of-coolant accident. In addition, an undervoltage condition will be imposed to simulate a loss of off-site power. The timing sequence will be checked to assure that the diesel generators can operate the LPCI pumps at rated speed within 18 seconds, and the core spray pumps at rated speed within twenty-four seconds.

## 4.9 BASES (Cont'd.)

Periodic tests between refueling outages verify the ability of the diesel generator to run at full load and the core and containment cooling pumps to deliver full flow. Periodic testing of the various components, plus a functional test one-a-cycle, is sufficient to maintain adequate reliability.

Although station batteries will deteriorate with time, utility experience indicates there is almost no possibility of precipitous failure. The type of surveillance described in this specification is that which has been demonstrated over the years to provide an indication of a cell becoming irregular or unserviceable long before it becomes a failure. In addition, the checks described also provide adequate indication that the batteries have the specified ampere hour capability.

The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outages. This testing frequency complies with the testing requirements of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450 (1975), "Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries," and Regulatory Guide 1.129, Revision 1 (February 1978), "Maintenance, Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants."

A performance test determines the ability of the battery to meet a specified discharge rate and duration based on the manufacturer's rating. A service test proves the capability of the battery to deliver the design requirements of the dc systems; i.e., supply and maintain in operable status all of the actual emergency loads for the design basis accident. A performance test is the most severe test because the cycling on the battery at manufacturer's rating shortens the service life of the battery. A service test is performed at design load instead of manufacturer's ratings.

The diesel fuel oil quality must be checked to ensure proper operation of the diesel generators. Water content should be minimized because water in the fuel could contribute to excessive damage to the diesel engine.

When it is determined that some auxiliary electrical equipment is out-of-service, the increased surveillance required in Section 4.5.F is deemed adequate to provide assurance that the remaining equipment will be operable.

The test interval for the Emergency Service Water System, plus the ESW booster pumps, Emergency Cooling Tower fans, and pump room fans associated with the ESW pumps is deemed adequate to provide assurance that the equipment will be operable based on good engineering judgment and system redundancy, plus the additional testing accomplished when the diesel generators are tested. Pump flow tests during normal operation will be performed by measuring the shut-off head.



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ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 105  
License No. DPR-56


1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company, et al. (the licensee) dated April 12, 1984, 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;
  - 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-56 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 105, are hereby incorporated in the license. PECO 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, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 9, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 105

FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain a vertical line indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

<u>Remove</u>	<u>Insert</u>
218	218
218a	218a
224	224

LIMITING CONDITIONS FOR OPERATION3.9 AUXILIARY ELECTRICAL SYSTEMApplicability:

Applies to the auxiliary electrical power system.

Objective:

To assure an adequate supply of electrical power for operation of those systems required for safety.

Specification:A. Auxiliary Electrical Equipment

The reactor shall not be made critical unless all of the following conditions are satisfied:

1. Both off-site sources and the startup transformers and emergency transformers are available and capable of automatically supplying power to the 4kV emergency buses.
2. The four diesel generators shall be operable and there shall be a minimum of 104,000 gal. of diesel fuel on site.
3. The 4kV emergency buses and the 480V emergency load centers are energized.
4. The four unit 125V batteries and their chargers shall be operable.

SURVEILLANCE REQUIREMENTS4.9 AUXILIARY ELECTRICAL SYSTEMApplicability:

Applies to the periodic testing requirements of the auxiliary electrical systems.

Objective:

Verify the operability of the auxiliary electrical system.

Specification:A. Auxiliary Electrical Equipment1. Diesel Generators

- a. Each diesel generator shall be manually started and loaded once each month to demonstrate operational readiness. The test shall continue for at least a one hour period at rated load.

During the monthly generator test the diesel generator starting air compressor shall be checked for operation and its ability to recharge air receivers. The operation of the diesel fuel oil transfer pumps shall be demonstrated, and the diesel starting time to reach rated voltage and frequency shall be logged.

LIMITING CONDITIONS FOR OPERATION  
3.9.ASURVEILLANCE REQUIREMENTS

## 4.9.A (Cont'd)

- b. Once per operating cycle the condition under which the diesel generator is required will be simulated and a test conducted to demonstrate that it will start and accept the emergency load within the specified time sequence. The results shall be logged.
- c. Once a month the quantity of diesel fuel available shall be logged.
- d. Once a month a sample of diesel fuel shall be checked for quality. The quality shall be within the acceptable limits specified in Table 1 of ASTM D975-68 and logged.
- e. Each diesel generator shall be given an annual inspection in accordance with instructions based on the manufacturer's recommendations.

## 2. Unit Batteries

- a. Every week the specific gravity, the voltage and temperature of the pilot cell and overall battery voltage shall be measured and logged.
- b. Every three months the measurements shall be made of voltage of each cell to nearest 0.1 Volt, specific gravity of each cell, and temperature of every fifth cell. These measurements shall be logged.
- c. The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outage. In lieu of the performance test every third refueling outage, any battery that shows "signs of degradation or has reached 85% of its service life" shall be subjected to an annual performance test.

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

3.9.A.

## 4.9.A (Cont'd)

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- a. Every two months the swing buses supplying power to the Low Pressure Coolant Injection System (LPCIS) valves shall be tested to assure that the transfer circuits operate as designed.

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The diesel fuel oil quality must be checked to ensure proper operation of the diesel generators. Water content should be minimized because water in the fuel could contribute to excessive damage to the diesel engine.

When it is determined that some auxiliary electrical equipment is out-of-service, the increased surveillance required in Section 4.5.F is deemed adequate to provide assurance that the remaining equipment will be operable.

The test interval for the Emergency Service Water System, plus the ESW booster pumps, Emergency Cooling Tower fans, and pump room fans associated with the ESW pumps is deemed adequate to provide assurance that the equipment will be operable based on good engineering judgment and system redundancy, plus the additional testing accomplished when the diesel generators are tested. Pump flow tests during normal operation will be performed by measuring the shut-off head.