



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

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. 188
License No. DPR-44

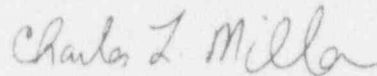
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company, et. al. (the licensee) dated May 25, 1993, as supplemented on March 11, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (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 or 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:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 188, 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



Charles L. Miller, 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: April 7, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 188

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 areas are indicated by marginal lines.

Remove

Insert

39
49
50
71b
226
229

39
49
50
71b
226
229

PBAPS

NOTES FOR TABLE 3.1.1

1. There shall be two operable or tripped trip systems for each function. If the minimum number of operable sensor channels for a trip system cannot be met, the affected trip system shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.
 - A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.
 - B. Reduce power level to IRM range and place mode switch in the start up position within 8 hours.
 - C. Reduce turbine load and close main steam line isolation valves within 8 hours.
 - D. Reduce power to less than 30% rated.
2. Permissible to bypass, in refuel and shutdown positions of the reactor mode switch.
3. Deleted.
4. Bypassed when reactor thermal power is less than 30% of rated as indicated by turbine first stage pressure.
5. IRMs are bypassed when APRMs are onscale and the reactor mode switch is in the run position.
6. The design permits closure of any two lines without a scram being initiated.
7. When the reactor is subcritical and the reactor water temperature is less than 212 degrees F, only the following trip functions need to be operable.
 - A. Mode switch in shutdown
 - B. Manual scram
 - C. High flux IRM
 - D. Scram discharge instrument volume high level
8. Not required to be operable when primary containment integrity is not required.
9. Not required to be operable when the reactor pressure vessel head is not bolted to the vessel.

PBAPS

3.1 BASES (Cont'd)

the amount of water which must be accommodated during a scram.

During normal operation the discharge volume is empty; however, should it fill with water, the water discharged to the piping from the reactor could not be accommodated which would result in slow scram times or partial control rod insertion. To preclude this occurrence, level switches have been provided in the instrument volume which alarm and scram the reactor when the volume of water reaches 50 gallons. As indicated above, there is sufficient volume in the piping to accommodate the scram without impairment of the scram times or amount of insertion of the control rods. This function shuts the reactor down while sufficient volume remains to accommodate the discharged water and precludes the situation in which a scram would be required but not be able to perform its function adequately.

A source range monitor (SRM) system is also provided to supply additional neutron level information during start-up but has no scram functions (reference paragraph 7.5.4 FSAR). Thus, the IRM and APRM are required in the "Refuel" and "Start/Hot Standby" modes. In the power range the APRM system provides required protection (reference paragraph 7.5.7 FSAR). Thus the IRM System is not required in the "Run" mode. The APRM's cover only the power range. The IRMs and APRMs provide adequate coverage in the start-up and intermediate range.

The high reactor pressure, high drywell pressure, reactor low water level and scram discharge volume high level scrams are required for Startup and Run modes of plant operation. They are, therefore, required to be operational for these modes of reactor operation.

The requirement to have the scram functions indicated in Table 3.1.1 operable in the Refuel mode assures that shifting to the Refuel mode during reactor power operation does not diminish the protection provided by the reactor protection system.

The turbine condenser low vacuum scram is only required during power operation and must be bypassed to start up the unit. The main condenser low vacuum trip is bypassed except in the run position of the mode switch.

Turbine stop valve closure occurs at 10% of valve closure. Below 30% of rated reactor thermal power the scram signal due to turbine stop valve closure is bypassed because the flux and pressure scrams are adequate to protect the reactor.

3.1 BASES (Cont'd.)

Turbine control valves fast closure initiates a scram based on pressure switches sensing Electro-Hydraulic Control (EHC) system oil pressure. The switches are located between fast closure solenoids and the disc dump valves, and are set relative ($500 < P < 850$ psig) to the normal EHC oil pressure of 1600 psig gauge that, based on the small system volume, they can rapidly detect valve closure or loss of hydraulic pressure. This scram signal is also bypassed when reactor thermal power is less than 30% of rated as indicated by turbine first stage pressure.

The requirement that the IRM's be inserted in the core when the APRM's read 2.5 indicated on the scale in the Startup and Refuel modes assures that there is proper overlap in the neutron monitoring system functions and thus, that adequate coverage is provided for all ranges of reactor operation.

TABLE 3.2.B (CONTINUED)

Unit 2

INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT
COOLING SYSTEMS

Minimum No. of Operable Instrument Channels Per Trip System (1)	Trip Function	Trip Level Setting	Number of Instrument Channels Provided by Design	Remarks
2 per 4 kV Bus	Emergency Transformer Degraded voltage (Inverse time - voltage). (CV-6)	87% ($\pm 5\%$) of Rated Voltage. Tests at 2940 volts in 30 seconds ($\pm 10\%$)		<ol style="list-style-type: none"> 1. Trips emergency transformer feed to 4kV emergency bus. 2. Fast transfer permissive.

LIMITING CONDITIONS FOR OPERATION

3.10.A Refueling Interlocks

3. The fuel grapple hoist load switch shall be set at ≤ 1000 lbs.
4. If the frame-mounted auxiliary hoist or the monorail-mounted auxiliary hoist is to be used for handling fuel with the head off the reactor vessel, the load limit switch on the hoist to be used shall be set at ≤ 400 lbs.
5. A maximum of two nonadjacent control rods may be withdrawn from the core for the purpose of performing control rod and/or control rod drive maintenance, provided the following conditions are satisfied:
 - a. The reactor mode switch shall be locked in the "refuel" position. The refueling interlock which prevents more than one control rod from being withdrawn may be bypassed for one of the control rods on which maintenance is being performed. All other refueling interlocks shall be operable.
 - b. A sufficient number of control rods shall be operable so that the core can be made subcritical with the strongest operable control rod fully withdrawn and all other operable control rods fully inserted, or all

SURVEILLANCE REQUIREMENTS

4.10.A.2 (Cont'd)

fully withdrawn and all other operable rods fully inserted. Alternatively if the remaining control rods are fully inserted and have their directional control valves electrically disarmed, it is sufficient to demonstrate that the core is subcritical with a margin of at least $0.25\% \Delta k$ at any time during the maintenance. A control rod on which maintenance is being performed shall be considered inoperable.

3.10 BASES

A. Refueling Interlocks

The refueling interlocks are designed to back up procedural core reactivity controls during refueling operations. The interlocks prevent an inadvertent criticality during refueling operations when the reactivity potential of the core is being altered.

To minimize the possibility of loading fuel into a cell containing no control rod, it is required that all control rods are fully inserted when fuel is being loaded into the reactor core. This requirement assures that during refueling the refueling interlocks, as designed, will prevent inadvertent criticality.

The refueling interlocks reinforce operational procedures that prohibit taking the reactor critical under certain situations encountered during refueling operations by restricting the movement of control rods and the operation of refueling equipment.

The refueling interlocks include circuitry which senses the condition of the refueling equipment and the control rods. Depending on the sensed condition, interlocks are actuated which prevent the movement of the refueling equipment or withdrawal of control rods (rod block).

Circuitry is provided which senses the following conditions:

1. All rods inserted.
2. Refueling platform positioned near or over the core.
3. Refueling platform hoists are fuel-loaded (fuel grapple, frame mounted hoist, monorail mounted hoist).
4. Fuel grapple not full up.
5. Deleted.
6. One rod withdrawn.

When the mode switch is in the "Refuel" position, interlocks prevent the refueling platform from being moved over the core if a control rod is withdrawn and fuel is on a hoist. Likewise, if the refueling platform is over the core with fuel on a hoist, control rod motion is blocked by the interlocks. When the mode switch is in the refuel position, only one control rod can be withdrawn. The refueling interlocks, in combination with core nuclear design and refueling procedures, limit the probability of an inadvertent criticality. The nuclear characteristics of the core assure that the reactor