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Docket Nos. 50-277
and 50-278

Philadelphia Electric Company
ATTN: Mr. Edward G. Bauer, Jr., Esquire
Vice President and General Counsel
2301 Market Street
Philadelphia, Pennsylvania 19101

Gentlemen:

The Commission has requested the Federal Register to publish the enclosed Notice of Proposed Issuance of Amendments to Facility Licenses Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station Units 2 and 3. The proposed amendments include changes to the Technical Specifications based on our letter to you dated September 23, 1975.

These amendments would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod drive mechanism collet housing failures and (2) require increased control rod surveillance when the possibility of a control rod drive mechanism collet housing failure exists.

A copy of our Safety Evaluation relating to this proposed action was forwarded to you with our letter dated September 23, 1975.

Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Reactor Licensing

Enclosures:

1. Federal Register Notice
2. Proposed Amendments w/Proposed Technical Specification changes

cc:

See next page	ORB#3	ORB#3	OELD SMO	ORB#3	
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SURNAME >	STEETS <i>S.A.T.</i>	TVerdery:acr	<i>S. SOHINKI</i>	GLear	
DATE >	12/19/75	12/1/75	12/2/75	12/1/75	

cc w/enclosures:

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General, Maryland
Annapolis, Maryland 31401

Warren Rich, Esquire
Special Assistant Attorney
General, Maryland
Annapolis, Maryland 21401

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Conner and Knotts
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Albert R. Steel, Chairman
Board of Supervisors
Peach Bottom Township
R. D. #1
Delta, Pennsylvania 17314

Wilmer P. Bolton
Chairman, Board of Supervisors
Drumore Township
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Holtwood, Pennsylvania 17532

Mr. R. A. Heiss, Coordinator
Pennsylvania State Clearinghouse
Governor's Office of State Planning
and Development
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Harrisburg, Pennsylvania 17120

Philadelphia Electric Company
ATTN: Mr. W. T. Ullrich
Peach Bottom Atomic
Power Station
Delta, Pennsylvania 17314



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. 50-278

PEACH BOTTOM ATOMIC POWER STATION UNIT 3

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
License No. DPR-56

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. 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;
 - B. 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
 - C. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Reactor Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance:



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 2

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.
License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. 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;
 - B. 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
 - C. An environmental statement or negative declaration need not be prepared in connection with the issuance of this amendment.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Reactor Licensing

Attachment:
Changes to the
Technical Specifications

Date of Issuance:

ATTACHMENT TO PROPOSED LICENSE AMENDMENT
PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-44
DOCKET NO. 50-277

The following pages are proposed as replacement pages of the Technical Specification: 99, 100, 108. The changed areas on the revised pages are shown by marginal lines. The following pages are proposed to be added: 99a and 100a.

MITING CONDITION FOR OPERATIONSURVEILLANCE REQUIREMENT3 REACTIVITY CONTROLApplicability:

Applies to the operational status of the control rod system.

Objective:

To assure the ability of the control rod system to control reactivity.

Specification:A. Reactivity Limitations1. Reactivity margin - core loading

A sufficient number of control rods shall be operable so that the core could be made sub-critical in the most reactive condition during the operating cycle with the strongest control rod fully withdrawn and all other operable control rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Control rods which cannot be moved with control rod drive pressure shall be considered inoperable. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.

4.3 REACTIVITY CONTROLApplicability:

Applies to the surveillance requirements of the control rod system.

Objective:

To verify the ability of the control rod system to control reactivity.

Specification:A. Reactivity Limitations1. Reactivity margin - core loading

Sufficient control rods shall be withdrawn following a refueling outage when core alterations were performed to demonstrate with a margin of 0.58% $\Delta k/k$ that the core can be made subcritical at any time in the subsequent fuel cycle with the analytically determined strongest operable control rod fully withdrawn and all other operable rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Each partially or fully withdrawn operable control rod shall be exercised one notch at least once each week when operating above 50% power. This test shall be performed at least once per 24 hours in the event power operation above 30% is continuing with three or more inoperable control rods or in the event power operation above 30% is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than three and if it has been demonstrated that control

2. Reactivity margin - inoperable control rods (cont'd)

housing failure is not the cause of an immovable control rod.

3.3.A (cont'd)

- b. The control rod directional control valves for inoperable control rods shall be disarmed electrically and the control rods shall be in such positions that Specification 3.3.A.1 is met.
- c. Control rods with scram times greater than those permitted by Specification 3.3.C.5 are inoperable, but if they can be inserted with control rod drive pressure they need not be disarmed electrically.
- d. Control rods with a failed "Full-in" or "Full-out" position switch may be bypassed in the Rod Sequence Control System and considered operable if the actual rod position is known. These rods must be moved in sequence to their correct positions (full in on insertion or full out on withdrawal).
- e. Control rods with inoperable accumulators or those whose position cannot be positively determined shall be considered inoperable.
- f. Inoperable control rods shall be positioned such that Specification 3.3.A.1 is met. In addition, during reactor power operation, no more than one control rod in any 5 x 5 array may be inoperable (at least 4 operable control rods must separate any 2 inoperable ones). If this Specification cannot be met the reactor shall not be started, or if at power, the reactor shall be brought to a cold shutdown condition within 24 hours.

4.3 REACTIVITY CONTROL

- b. A second licensed operator shall verify the conformance to Specification 3.3.A.2d before a rod may be bypassed in the Rod Sequence Control System.

B. Control Rods

1. The coupling integrity shall be verified for each withdrawn control rod as follows:
 - a. When a rod is withdrawn the first time after each refueling outage or after maintenance, observe discernible response of the nuclear instrumentation and rod position indication for the "full in" and "full out" position. However, for initial rods when response is not discernible, subsequent exercising of these rods after the reactor is above 3% shall be performed to verify instrumentation response.

3.3 and 4.3 BASMS (cont'd.)

margin required due to control cell material manufacturing tolerances and calculational uncertainties has experimentally been determined to be $0.38\% \Delta k/k$. When this additional margin is demonstrated, it assures that the reactivity control requirement is met.

2. Reactivity margin - inoperable control rods.

Specification 3.3.A.2 requires that a rod be taken out of service if it cannot be moved with drive pressure. If the rod is fully inserted and then disarmed electrically*, it is in a safe position of maximum contribution to shutdown reactivity. If it is disarmed electrically in a non-fully inserted position, that position shall be consistent with the shutdown reactivity limitation stated in Specification 3.3.A.1. This assures that the core can be shutdown at all times with the remaining control rods assuming the strongest operable control rod does not insert. Inoperable bypassed rods will be limited within any group to not more than one control rod of a (5 x 5) twenty-five control rod array. The use of the individual rod bypass switches in the Rod Sequence Control System to substitute for a failed "full in" or "full out" position switch will not be limited as long as the actual position of the control rod is known. Also if damage within the control rod drive mechanism and in particular, cracks in drive internal housings, cannot be ruled out, then a generic problem affecting a number of drives cannot be ruled out. Circumferential cracks resulting from stress assisted intergranular corrosion have occurred in the collet housing of drives at several EBRs. This type of cracking could occur in a number of drives and if the cracks propagated until severance of the collet housing occurred, scram could be prevented in the affected rods. Limiting the period of operation with a potentially severed rod and requiring increased surveillance after detecting one stuck rod will assure that the reactor will not be operated with a large number of rods with failed collet housings.

B. Control Rod Withdrawal

1. Control rod drop accidents as discussed in the FEAR can lead to significant core damage. If coupling integrity is maintained, the possibility of a rod drop accident is eliminated. The overtravel position feature provides a positive check as only uncoupled drives may reach this position. Neutron instrumentation response to rod movement provides a verification that the rod is following its drive. Absence of such response to drive movement could indicate an uncoupled condition. Rod position indication is required for proper function of the rod sequence control system and the rod worth minimizer (RWM).

To disarm the drive electrically, four Amphenol type plug connectors are removed from the drive insert and withdrawal solenoids rendering the rod incapable of withdrawal. This procedure is equivalent to valving out the drive and is preferred because, in this condition, drive water cools and minimizes crud accumulation on the drive. Electrical disarming does not eliminate position indication.

ATTACHMENT TO PROPOSED LICENSE AMENDMENT

PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

The following pages are proposed as replacement pages of the Technical Specification: 99, 100, 108. The changed areas on the revised pages are shown by marginal lines. The following pages are proposed to be added: 99a and 100a.

LIMITING CONDITION FOR OPERATIONSURVEILLANCE REQUIREMENT.3 REACTIVITY CONTROLApplicability:

Applies to the operational status of the control rod system.

Objective:

To assure the ability of the control rod system to control reactivity.

Specification:A. Reactivity Limitations1. Reactivity margin - core loading

A sufficient number of control rods shall be operable so that the core could be made subcritical in the most reactive condition during the operating cycle with the strongest control rod fully withdrawn and all other operable control rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Control rods which cannot be moved with control rod drive pressure shall be considered inoperable. If a partially or fully withdrawn control rod drive cannot be moved with drive or scram pressure the reactor shall be brought to a shutdown condition within 48 hours unless investigation demonstrates that the cause of the failure is not due to a failed control rod drive mechanism collet housing.

4.3 REACTIVITY CONTROLApplicability:

Applies to the surveillance requirements of the control rod system.

Objective:

To verify the ability of the control rod system to control reactivity.

Specification:A. Reactivity Limitations1. Reactivity margin - core loading

Sufficient control rods shall be withdrawn following a refueling outage when core alterations were performed to demonstrate with a margin of 0.38% $\Delta k/k$ that the core can be made subcritical at any time in the subsequent fuel cycle with the analytically determined strongest operable control rod fully withdrawn and all other operable rods fully inserted.

2. Reactivity margin - inoperable control rods

- a. Each partially or fully withdrawn operable control rod shall be exercised one notch at least once each week when operating above 30% power. This test shall be performed at least once per 24 hours in the event power operation above 30% is continuing with three or more inoperable control rods or in the event power operation above 30% is continuing with one fully or partially withdrawn rod which cannot be moved and for which control rod drive mechanism damage has not been ruled out. The surveillance need not be completed within 24 hours if the number of inoperable rods has been reduced to less than three and if it has been demonstrated that control rod drive mechanism collet

LIMITING CONDITION FOR OPERATION

. SURVEILLANCE REQUIREMENT

2. Reactivity margin - inoperable control rods (cont'd)

housing failure is not the cause of an immovable control rod.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

3.3.A (cont'd)

- b. The control rod directional control valves for inoperable control rods shall be disarmed electrically and the control rods shall be in such positions that Specification 3.3.A.1 is met.
- c. Control rods with scram times greater than those permitted by Specification 3.3.C.3 are inoperable, but if they can be inserted with control rod drive pressure they need not be disarmed electrically.
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4.3 REACTIVITY CONTROL

- b. A second licensed operator shall verify the conformance to Specification 3.3.A.2d before a rod may be bypassed in the Rod Sequence Control System.

B. Control Rods

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3.3 and 4.3 BASES (cont'd.)

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UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-277 AND 50-278

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

NOTICE OF PROPOSED ISSUANCE OF AMENDMENTS
TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating Licenses No. DPR-44 and DPR-56 issued to Philadelphia Electric Company, Public Service Electric and Gas Company, Delmarva Power and Light Company, Atlantic City Electric Company (the licensee) for operation of the Peach Bottom Atomic Power Station Units 2 and 3 (the facilities) located in York County, Pennsylvania.

These amendments would revise the Technical Specifications to (1) add requirements that would limit the period of time operation can be continued with immovable control rods that could have control rod mechanism collet housing failures and (2) require increased control rod surveillance when the possibility of a control rod drive mechanism collet housing failure exists.

Prior to issuance of the proposed license amendments, the Commission will have made the findings required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations.

By _____, the licensee may file a request for a hearing and any person whose interest may be affected by this proceeding may file a request for a hearing in the form of a petition for leave to intervene

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with respect to the issuance of these amendments to the subject facility operating licenses. Petitions for leave to intervene must be filed under oath or affirmation in accordance with the provisions of Section 2.714 of 10 CFR Part 2 of the Commission's regulations. A petition for leave to intervene must set forth the interest of the petitioner in the proceeding, how that interest may be affected by the results of the proceeding, and the petitioner's contentions with respect to the proposed licensing action. Such petitions must be filed in accordance with the provisions of this FEDERAL REGISTER notice and Section 2.714, and must be filed with the Secretary of the Commission, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Docketing and Service Section, by the above date. A copy of the petition and/or request for a hearing should be sent to the Executive Legal Director, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555 and to Eugene J. Bradley, Philadelphia Electric Company, Assistant General Counsel, 2301 Market Street, Philadelphia, Pennsylvania 19101, the attorney for the licensee.

A petition for leave to intervene must be accompanied by a supporting affidavit which identifies the specific aspect or aspects of the proceeding as to which intervention is desired and specifies with particularity the facts on which the petitioner relies as to both his interest and his contentions with regard to each aspect on which intervention is requested. Petitions stating contentions relating only to matters outside the Commission's jurisdiction will be denied.

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All petitions will be acted upon by the Commission or licensing board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel. Timely petitions will be considered to determine whether a hearing should be noticed or another appropriate order issued regarding the disposition of the petitions.

In the event that a hearing is held and a person is permitted to intervene, he becomes a party to the proceeding and has a right to participate fully in the conduct of the hearing. For example, he may present evidence and examine and cross-examine witnesses.

For further details with respect to these actions, see the Commission's letter to Philadelphia Electric Company dated September 23, 1975, and the attached proposed Technical Specifications and the Safety Evaluation by the Commission's staff dated September 23, 1975, which are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555 and at the Martin Memorial Library, 159 E. Market Street, York, Pennsylvania 17401. These license amendments and the Safety Evaluation may be inspected at the above locations and a copy may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this 7 day of January 1976

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear, Chief
Operating Reactors Branch #3
Division of Reactor Licensing

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SURNAME >	STeets	TVerdery:acr		GLear		
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