

March 5, 1985

DMB 016

Dockets Nos. 50-277  
and 50-278

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

Dear Mr. Bauer:

SUBJECT: TECHNICAL SPECIFICATION AMENDMENTS PERTAINING TO MODIFICATIONS  
OF THE ADS PER NUREG-0737, ITEM II.K.3.18

The Commission has issued the enclosed Amendments Nos. 106 and 110 to Facility Operating Licenses Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Units Nos. 2 and 3. These amendments consist of Technical Specification (TS) changes relating to proposed modifications to the Automatic Depressurization System (ADS) to conform to the requirements of NUREG-0737, II.K.3.18. These changes were proposed in your letter dated September 19, 1984.

The amendments add a surveillance requirement for the ADS Bypass Timer and change the title of the "Auto Blowdown Timer" to "ADS Actuation Timer".

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,

**"ORIGINAL SIGNED BY:"**

Gerald E. Gears, Project Manager  
Operating Reactors Branch #4  
Division of Licensing

Enclosures:

1. Amendment No. 106 to DPR-44
2. Amendment No. 110 to DPR-56
3. Safety Evaluation

cc w/enclosures:  
See next page

ORB#4:DL  
RIngram  
2/19/85

ORB#4:DL  
GGears;pn  
2/19/85

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JStolz  
2/19/85

OE:DL  
L Finkelskain  
2/27/85  
AD:DL  
GLajinas  
2/19/85

Philadelphia Electric Company

cc w/enclosure(s):

Eugene J. Bradley  
Philadelphia Electric Company  
Assistant General Counsel  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Troy B. Conner, Jr.  
1747 Pennsylvania Avenue, N.W.  
Washington, D. C. 20006

Thomas A. Deming, Esq.  
Assistant Attorney General  
Department of Natural Resources  
Annapolis, Maryland 21401

Philadelphia Electric Company  
ATTN: Mr. R. Fleishmann  
Peach Bottom Atomic  
Power Station  
Delta, Pennsylvania 17314

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

Herb J. Williams  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Peach Bottom Atomic Power Station  
P. O. Box 399  
Delta, Pennsylvania 17314

Mr. Thomas E. Murley, Regional Administrator  
U. S. Nuclear Regulatory Commission, Region I  
Office of Inspection and Enforcement  
631 Park Avenue  
King of Prussia, Pennsylvania 19406

Regional Radiation Representative  
EPA Region III  
Curtis Building (Sixth Floor)  
6th and Walnut Streets  
Philadelphia, Pennsylvania 19106

M. J. Cooney, Superintendent  
Generation Division - Nuclear  
Philadelphia Electric Company  
2301 Market Street  
Philadelphia, Pennsylvania 19101

Mr. R. A. Heiss, Coordinator  
Pennsylvania State Clearinghouse  
Governor's Office of State Planning  
and Development  
P. O. Box 1323  
Harrisburg, Pennsylvania 17120

Thomas M. Gerusky, Director  
Bureau of Radiation Protection  
Pennsylvania Department of  
Environmental Resources  
P. O. Box 2063  
Harrisburg, Pennsylvania 17120



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. 106  
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 September 19, 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:

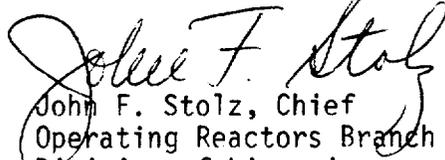
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Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 106, 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: March 5, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 106

FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Remove

67

Insert

67

TABLE 3.2.B

## INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

Amendment No. 47, 96, 106

-67-

| Minimum No. Of Operable Instrument Channels Per Trip System(1) | Trip Function                                | Trip Level Setting          | Number of Instrument Channels Provided by Design | Remarks  |
|--|--|-----------------------------|--|--|
| 2  | Core Spray Pump Start Timer                  | 6 +/- 1 sec<br>10 +/- 1 sec | 4 timers<br>4 timers                             | In conjunction with loss of power initiates the starting of CSCS pumps   |
| 2  | LPCI Pump Start Timer (Two Pumps)            | 5 +/- 1 sec                 | 4 timers   |  |
| 1  | ADS Actuation Timer                          | 90 <= t <= 120 seconds      | 2 timers   | In conjunction with Low Reactor Water Level, High Drywell Pressure and LPCI or Core Spray Pump running interlock, initiates ADS. |
| 2  | ADS Bypass Timer*                            | 8 <= t <= 10 minutes        | 4 timers   | In conjunction with low reactor water level, bypasses high drywell pressure initiation of ADS.                                   |
| 2  | RHR (LPCI) Pump Discharge Pressure Interlock | 50 +/- 10 psig              | 4 channels                                       | Defers ADS actuation pending confirmation of Low Pressure Core Cooling system operation (LPCI Pump running interlock).           |
| 2  | Core Spray Pump Discharge Pressure Interlock | 185 +/- 10 psig             | 4 channels                                       | Defers ADS actuation pending confirmation of Low Pressure Core cooling system operation (Core Spray Pump running interlock).     |

\*Effective when modification associated with this amendment is complete.



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 NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 110  
License No. DPR-56

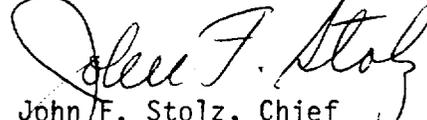
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company, et al. (the licensee) dated September 19, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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.(?) 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. 110, 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: March 5, 1985

ATTACHMENT TO LICENSE AMENDMENT NO.110

FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Remove

67

Insert

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TABLE 3.2.B

## 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  | Core Spray Pump Start Timer                  | 6 +/- 1 sec<br>10 +/- 1 sec | 4 timers<br>4 timers                             | In conjunction with loss of power initiates the starting of CSCS pumps.  |
| 2  | LPCI Pump Start Timer (Two Pumps)            | 5 +/- 1 sec                 | 4 timers   |  |
| 1  | ADS Actuation Timer                          | 90 <=/ t </= 120 seconds    | 2 timers   | In conjunction with Low Reactor Water Level, High Drywell Pressure and LPCI or Core Spray Pump running interlock, initiates ADS. |
| 2  | ADS Bypass Timer*                            | 8 <=/ t </= 10 minutes      | 4 timers   | In conjunction with low reactor water level, bypasses high drywell pressure initiation of ADS.                                   |
| 2  | RHR (LPCI) Pump Discharge Pressure Interlock | 50 +/- 10 psig              | 4 channels                                       | Defers ADS actuation pending confirmation of Low Pressure Core Cooling system operation (LPCI Pump running interlock).           |
| 2  | Core Spray Pump Discharge Pressure Interlock | 185 +/- 10 psig             | 4 channels                                       | Defers ADS actuation pending confirmation of Low Pressure Core cooling system operation (Core Spray Pump running interlock).     |

\*Effective when modification associated with this amendment is complete.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION SUPPORTING

AMENDMENTS NOS. 106 AND 110 TO FACILITY OPERATING LICENSES NOS. DPR-44 AND DPR-56

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

PEACH BOTTOM ATOMIC POWER STATION, UNITS NOS. 2 AND 3

DOCKETS NOS. 50-277 AND 50-278

1.0 Introduction

In a letter dated September 19, 1984, the Philadelphia Electric Company (the licensee) requested changes to the Technical Specifications (TSs) for Peach Bottom Atomic Power Station, Units 2 and 3. The proposed changes are made in conjunction with a modification to the actuation logic for the Automatic Depressurization System (ADS). The change to the ADS logic adds a timer which bypasses the high drywell pressure permissive after a sustained low water level indication, and adds a manually operated inhibit switch. These design changes were approved by the NRC staff in reference 1.

The Automatic Depressurization System (ADS) has been modified in accordance with TMI Action Plan II.K.3.18 to automatically initiate in the absence of a high drywell pressure initiation signal. The ADS functions as a backup to the High Pressure Core Injection System (HPCI) by depressurizing the reactor vessel so that low pressure systems may inject water for core cooling. The ADS is currently actuated upon coincident signals of reactor vessel low water level, high drywell pressure, a low pressure Emergency Core Cooling System (ECCS) pump running, and a 105 second time delay which allows ADS to be bypassed if the operator believes the actuation signal is erroneous or if vessel water level can be restored. However, for transient and accident events which do not produce high drywell pressure, and are further degraded by a loss of HPCI, manual actuation of the ADS would be required to ensure adequate core cooling.

To reduce the dependence for manual actuation to ensure adequate core cooling, the licensee has installed bypass timers which will automatically bypass the drywell high pressure inputs required for ADS actuation if reactor vessel water level remains below the ADS initiation setpoint (level 1) for a sustained period. After a set time delay of 9 minutes (plus or minus 1 minute) and the 105 second time delay, ADS will be automatically actuated in the absence of a drywell high pressure signal if a reactor vessel low water level condition still exists and a low pressure ECCS pump is running.

Four 9 minute time delays have been added, one for each ADS drywell high pressure initiation channel. There are two ADS actuation channels (Division 1 and Division 2), either of which can perform the required ADS function. There are two bypass timers associated with each ADS division. The low reactor water level signal is sealed in so that the bypass timer (9 minutes) will not automatically reset upon recovery of low reactor water level. The reset of this sealed-in low reactor water level signal is performed by the same switches that originally reset the high drywell pressure seal-in. The 105 second actuation timer will reset if reactor water level recovers above the trip elevation before it times out.

Another modification made to the Peach Bottom ADS consists of the addition of two ADS manual inhibit switches (one per ADS division) that permit the operator to override the ADS automatic blowdown logic if necessary. These manual inhibit switches are located on a control room panel near the controls for the safety relief valves. A key-locked switch is used for the manual inhibit function to provide a means of limiting the potential for inadvertent actuation of the manual inhibit. Alarms alert the operator of time-out of the bypass timer and activation of the manual inhibit switches.

## 2.0 Discussion and Evaluation

The proposed changes would add the "ADS Bypass Timer" to TS Table 3.2.B (Instrumentation that Initiates or Controls the Core and Containment Cooling Systems) with trip setting limits of 8 to 10 minutes (9 minutes - plus or minus 1 minute). The "Remarks" column is also modified to describe the function of the bypass timer. Additionally, the title of the "Auto Blowdown Timer" would be changed to "ADS Actuation Timer" in order to correctly identify the function of this existing timer. The bypass timer trip setting is based upon analyses which shows that the peak cladding temperature (PCT) of the fuel elements will be less than 1500°F for the limiting event requiring ADS actuation. Both the bypass timer and a manual inhibit switch approved under II.K.3.18 are also covered by the surveillance requirements for the ADS. The approved modifications will be implemented during the first refueling outages, for each unit, commencing after issuance of these amendments. Therefore, the approved TS changes will be effective upon completion of these modifications.

We have reviewed the licensee's proposed changes and conclude that these changes are acceptable.

## 3.0 Environmental Consideration

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in surveillance requirements. We have 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

#### 4.0 Conclusion

We have 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 5, 1985

Principal NRC Contributors: T. Collins, J. Mauck

REFERENCE

1. Letter to E. G. Bauer, Jr., Philadelphia Electric Company from G. W. Rivenbark, NRC, dated June 5, 1984.