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Dockets 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 issued the enclosed Amendments Nos. 28 and 27 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 changes to the Technical Specifications and are in response to your requests dated August 25, 1976 and October 5, 1976.

These amendments will modify the Technical Specifications related to the Core Spray (CS) and Low Pressure Coolant Injection (LPCI) System injection valve open permissive setpoints, Recirculation Pump discharge valve (RPDV) closure permissive setpoint and the minimum single LPCI pump flow rate for both Peach Bottom units. Additionally, on Peach Bottom Unit No. 3, it will incorporate changes relating to the Limiting Conditions for Operation and surveillance requirements for the LPCI and CS systems which were previously issued to Peach Bottom Unit No. 2 in Amendment No. 23.

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

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

Enclosures:

1. Amendments Nos. 28 and 27
2. Safety Evaluation
3. Federal Register Notice



OFFICE	ORB#3	ORB#3	OELD	ORB#3		
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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

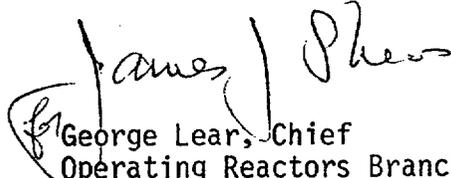
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 28  
License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company, Public Service Electric and Gas Company, Delmarva Power and Light Company, and Atlantic City Electric Company, (the licensees) dated October 5, 1976, 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 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 that modifications to the pressure permissive switches are completed for the Core Spray and Low Pressure Coolant Injection Systems injection valves and the Recirculation Pump discharge valves.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "George Lear".

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

Attachment:  
Changes to the  
Technical Specifications

Date of Issuance: November 15, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 28  
TO THE TECHNICAL SPECIFICATIONS  
FACILITY OPERATING LICENSE NO. DPR-44  
DOCKET NO. 50-277

Replace pages 66 and 126 with the attached revised pages.

TABLE 3.2.B (Cont'd.)

## 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	Reactor Low Pressure	400-500 psig	4 Inst. Channels	Permissive for opening Core Spray and LPCI Admission valves. Coincident with high dry well pressure, starts LPCI and Core Spray pumps.
2	Reactor Low Pressure	200-250 psig	4 Inst. Channels	Permissive for closing Recirculating Pump Discharge Valve.
1	Reactor Low Pressure	$50 \leq P \leq 75$ psig	2 Inst. Channels	In conjunction with PCI signal permits closure of RHR (LPCI) injection valves.
2	Reactor Drywell Pressure	$\leq 2$ psig	4 Inst. Channels	1. In conjunction with Low-Low Reactor Water Level, 120 second time delay and LPCI or Core Spray pump running, initiates Auto Blow-down (ADS).

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENT3.5.A Core Spray and LPCI Subsystems  
(Cont'd)

3. Two independent Low Pressure Coolant Injection (LPCI) subsystems will be operable with each subsystem comprised of:

- a. (Two 33-1/3% capacity pumps,
- b. An operable flow path capable of taking suction from the suppression pool and transferring the water to the reactor pressure vessel, and
- c. During power operation the LPCI system cross-tie valve closed and the associated valve motor operator circuit breaker locked in the off position.

Both LPCI subsystems shall be operable whenever irradiated fuel is in the reactor vessel, and prior to reactor startup from a Cold Shutdown Condition, except as specified in 3.5.A.4 and 3.5.A.5 below.

4. From and after the date that one of the four LPCI pumps is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days provided that during such seven days the remaining active components of the LPCI subsystems, and all active components of both core spray subsystems are operable.
5. From and after the date that one LPCI subsystem is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding 7 days unless it is sooner made operable, provided that during such 7 days all active components of both core spray subsystems and the remaining LPCI subsystem are operable.

4.5.A Core Spray and LPCI Subsystems  
(Cont'd)

- | <u>Item</u>   | <u>Frequency</u>                                |
|---|---|
| (c) Motor Operated valve operability  | Once/month                                      |
| (d) Pump Flow Rate  | Once/3 months                                   |
| Each LPCI pump shall deliver 10,900 gpm against a system head corresponding to a vessel pressure of 20 psig based on individual pump tests. |   |
| (e) Operability check to ensure that pumps will start and injection valves will open  | In accordance with 4.5.A.2, 4.5.A.4 and 4.5.A.5 |
4. When it is determined that one of the RHR (LPCI) pumps is inoperable at a time when it is required to be operable, the remaining LPCI pumps and associated flow paths and both core spray subsystems shall be demonstrated to be operable in accordance with 4.5.1(f) and 4.5.A.3(e) within 24 hours and at least once per 72 hours thereafter until the LPCI subsystem is restored to operable status.
  5. When it is determined that one of the LPCI subsystems is inoperable, both core spray subsystems and the remaining LPCI subsystem shall be demonstrated to be operable within 24 hours, and at least once per 72 hours thereafter until the LPCI subsystem is restored to operable status.



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

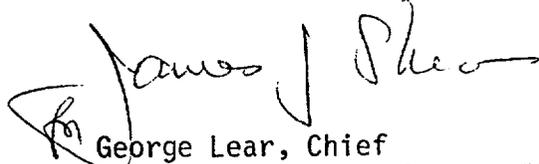
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 27  
License No. DPR-56

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment by Philadelphia Electric Company, Public Service Electric and Gas Company, Delmarva Power and Light Company, and Atlantic City Electric Company, (the licensees) dated August 25, 1976 and October 5, 1976, 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 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 that modifications to the pressure permissive switches are completed for the Core Spray and Low Pressure Coolant Injection Systems injection valves and the Recirculation Pump discharge valves.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "George Lear".

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 15, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 27

TO THE TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace pages 66, 124-127, 134-136, and 139 with the attached revised pages. No changes have been made on page 136.

TABLE 3.2.B (Cont'd.)

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	Reactor Low Pressure	400-500 psig	4 Inst. Channels	Permissive for opening Core Spray and LPCI Admission valves. Coincident with high dry well pressure, starts LPCI and Core Spray pumps.
2	Reactor Low Pressure	200-250 psig	4 Inst. Channels	Permissive for closing Recirculating Pump Discharge Valve.
1	Reactor Low Pressure	$50 \leq P \leq 75$ psig	2 Inst. Channels	In conjunction with PCI signal permits closure of RHR (LPCI) injection valves.
2	Reactor Drywell Pressure	$\leq 2$ psig	4 Inst. Channels	1. In conjunction with Low-Low Reactor Water Level, 120 second time delay and LPCI or Core Spray pump running, initiates Auto Blow-down (ADS).

- 99 -  
- 66 -

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENT

3.5 CORE AND CONTAINMENT COOLING SYSTEMS

Applicability:

Applies to the operational status of the core and suppression pool cooling subsystems.

Objective:

To assure the operability of the core and suppression pool cooling subsystems under all conditions for which this cooling capability is an essential response to plant abnormalities.

Specification:

- A. Core Spray and LPCI Subsystems
- 1. Two independent Core Spray Subsystems (CSS) shall be operable with each subsystem comprised of:
  - a. (Two 50%) capacity centrifugal pumps.
  - b. An operable flow path capable of taking suction from the suppression pool and transferring the water to the spray sparger in the reactor vessel.

4.5 CORE AND CONTAINMENT COOLING SYSTEMS

Applicability:

Applies to the Surveillance Requirements of the core and suppression pool cooling subsystems which are required when the corresponding Limiting Condition for operation is in effect.

Objective:

To verify the operability of the core and suppression pool cooling subsystems under all conditions to which this cooling capability is an essential response to station abnormalities.

Specification:

- A. Core Spray and LPCI Subsystems
- 1. Core Spray Subsystem Testing.
 

<u>Item</u>	<u>Frequency</u>
(a) Simulated Automatic Actuation test.	Once/Operating Cycle
(b) Pump Operability	Once/month
(c) Motor Operated Valve Operability	Once/month

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENT

3.5.A Core Spray and LPCI Subsystems (Cont'd.)

Both CSS shall be operable whenever irradiated fuel is in the vessel and prior to reactor startup from a Cold Shutdown condition except as specified in 3.5.A.2 and 3.5.F.3 below.

2. From and after the date that one of the core spray subsystems is made or found to be inoperable for any reason, continued reactor operation is permissible during the succeeding seven days provided that during such seven days all active components of the other core spray subsystem and active components of the LPCI subsystems are operable.

Amendment No. 27

4.5.A Core Spray and LPCI Subsystems (Cont'd.)

	<u>Item</u>	<u>Frequency</u>
(d)	Pump flow rate Both loops shall deliver at least 6250 gpm against a system head corresponding to a reactor vessel pressure of 105 psig.	Once/3 months
(e)	Core Spray Header AP Instrumentation	
	Check	Once/day
	Calibrate	Once/3 months
(f)	Operability check to ensure that pumps will start and that injection valves will open.	In accordance with 4.5.A.2, 4.5.A.4 and 4.5.A.5
2.	When it is determined that one core spray subsystem is inoperable, the operable core spray subsystem and the LPCI subsystems shall be demonstrated to be operable in accordance with 4.5.A.1 (f) and 4.5.A.3(e) within 24 hours, and at least once per 72 hours thereafter until the inoperable core spray subsystem is restored to operable status.	
3.	LPCI Subsystem Testing shall be as follows:	
(a)	Simulated Automatic Actuation Test	Once/Operating Cycle
(b)	Pump Operability	Once/1 month

## LIMITING CONDITIONS FOR OPERATION

## SURVEILLANCE REQUIREMENT

3.5.A Core Spray and LPCI Subsystems  
(Cont'd)

3. Two independent Low Pressure Coolant Injection (LPCI) subsystems will be operable with each subsystem comprised of:

- a. (Two 33-1/3% capacity pumps,
- b. An operable flow path capable of taking suction from the suppression pool and transferring the water to the reactor pressure vessel, and
- c. During power operation the LPCI system cross-tie valve closed and the associated valve motor operator circuit breaker locked in the off position.

Both LPCI subsystems shall be operable whenever irradiated fuel is in the reactor vessel, and prior to reactor startup from a Cold Shutdown Condition, except as specified in 3.5.A.4 and 3.5.A.5 below.

4. From and after the date that one of the four LPCI pumps is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days provided that during such seven days the remaining active components of the LPCI subsystems, and all active components of both core spray subsystems are operable.
5. From and after the date that one LPCI subsystem is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding 7 days unless it is sooner made operable, provided that during such 7 days all active components of both core spray subsystems and the remaining LPCI subsystem are operable.

4.5.A Core Spray and LPCI Subsystems  
(Cont'd)

<u>Item</u>	<u>Frequency</u>
(c) Motor Operated valve operability	Once/month
(d) Pump Flow Rate	Once/3 months
Each LPCI pump shall deliver 10,900 gpm against a system head corresponding to a vessel pressure of 20 psig based on individual pump tests.	
(e) Operability check to ensure that pumps will start and injection valves will open	In accordance with 4.5.A.2, 4.5.A.4 and 4.5.A.5

4. When it is determined that one of the RHR (LPCI) pumps is inoperable at a time when it is required to be operable, the remaining LPCI pumps and associated flow paths and both core spray subsystems shall be demonstrated to be operable in accordance with 4.5.1(f) and 4.5.A.3(e) within 24 hours and at least once per 72 hours thereafter until the LPCI subsystem is restored to operable status.
5. When it is determined that one of the LPCI subsystems is inoperable, both core spray subsystems and the remaining LPCI subsystem shall be demonstrated to be operable within 24 hours, and at least once per 72 hours thereafter until the LPCI subsystem is restored to operable status.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENT

3.5.A Core Spray and LPCI Subsystems (cont'd.)

6. If the requirements of 3.5.A cannot be met, an orderly shutdown of the reactor shall be initiated and the reactor shall be in the Cold Shutdown Condition within 36 hours.

B. Containment Cooling Subsystem (HPSW)

1. Except as specified in 3.5.B.2, 3.5.B.3, 3.5.B.4 and 3.5.F.3 below, all containment cooling subsystem loops shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F, and prior to reactor startup from a Cold Condition.
  
2. From and after the date that any two HPSW pumps are made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding thirty days, unless such pump is sooner made operable, provided that during such thirty days all other active components of the containment cooling subsystem are operable.

4.5.A Core Spray and LPCI Subsystems (cont'd.)

B. Containment Cooling Subsystem (HPSW)

1. Containment Cooling Subsystem Testing shall be as follows:

	<u>Item</u>	<u>Frequency</u>
(a)	Pump & Valve Operability	Once/3 months
(b)	Pump Capacity Test. Each HPSW pump shall deliver 4500 gpm at 280 psig.	After pump maintenance and every 3 months
(c)	Air test on drywell and torus headers and nozzles.	Once/5 years

2. When it is determined that any two HPSW pumps are inoperable, the remaining components of the containment cooling subsystems shall be demonstrated to be operable immediately and weekly thereafter.

3.5.A BASESCore Spray and LPCI Subsystems  
Core Spray Subsystem (CSS)

The CSS is provided to assure that the core is adequately cooled following a loss-of-coolant accident. Two redundant loops each provide adequate core cooling capacity for all break sizes from 0.2 ft<sup>2</sup> up to and including the double-ended reactor recirculation line break, and for smaller breaks following depressurization by the Automatic Depressurization System (ADS).

The CSS specifications are applicable whenever irradiated fuel is in the core because the CSS is a primary source of emergency core cooling after the reactor vessel is depressurized and also provides a source for flooding of the core in case of accidental draining.

With one CSS inoperable, the demonstrated operability of the redundant full capacity CSS and the full capacity Low Pressure Coolant Injection system provides assurance of adequate core cooling and justifies the specified 7 days out-of-service period.

The surveillance requirements provide adequate assurance that the CSS will be operable when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

Low Pressure Coolant Injection System (LPCIS)

The LPCIS is provided to assure that the core is adequately cooled following a loss-of-coolant accident. Two loops each with two pumps provide adequate core flooding for all break sizes from 0.2 ft<sup>2</sup> up to and including the double-ended reactor recirculation line break, and for small breaks following depressurization by the ADS.

The LPCIS specifications are applicable whenever there is irradiated fuel in the reactor vessel because LPCIS is a primary source of water for flooding the core after the reactor vessel is depressurized.

With one LPCIS pump inoperable, or one LPCIS loop inoperable, adequate core flooding is assured by the demonstrated operability of the redundant LPCIS pumps or loop, and both CSS loops. The reduced redundancy justifies the specified 7 day out-of-service period.

The surveillance requirements provide adequate assurance that the LPCI will be operable when required. Although all active components are testable and full flow can be demonstrated by recirculation during reactor operation, a complete functional test requires reactor shutdown. The pump discharge piping is maintained full to prevent water hammer damage to piping and to start cooling at the earliest moment.

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### 3.5.B BASES

#### Containment Cooling Subsystem

The containment cooling subsystem for Peach Bottom 2 and 3 consists of 4 loops each with 1 LPCI pump and 1 HPSW pump per loop. The design of these systems is predicated upon use of 1 LPCI, and 1 HPSW pump for heat removal after a design basis event. Thus, there are ample spares for margin above the design conditions. Loss of margin should be avoided and the equipment maintained in a state of operability so a 30-day out-of service time is chosen for this equipment. If three loops are out-of-service, reactor operation is permitted for seven days with daily testing of the operable loop after testing the appropriate diesel generator.

With components or subsystems out-of-service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative maintenance, etc., the pump and valve operability checks will be performed to demonstrate operability of the remaining components. However, if a failure, design deficiency, etc., caused the out-of-service period, then the demonstration of operability should be thorough enough to assure that a similar problem does not exist on the remaining components. For example, if an out-of-service period were caused by failure of a pump to deliver rated capacity, the other pumps of this type might be subjected to a capacity test. In any event, surveillance procedures, as required by Section 6 of these specifications, detail the required extent of testing.

The pump capacity test is a comparison of measured pump performance parameters to shop performance tests. Tests during normal operation will be performed by measuring the flow indication and/or the pump discharge pressure will be measured and its power requirement will be used to establish flow at that pressure.

### 3.5.E BASES (Cont'd.)

With one ADS valve known to be incapable of automatic operation, four valves remain operable to perform their ADS function. However, since the ECCS Loss-of-Coolant Accident analysis for small line breaks assumed that all five ADS valves were operable, reactor operation with one ADS valve inoperable is only allowed to continue for seven (7) days provided that the HPCI system is demonstrated to be operable and that the actuation logic for the (remaining) four ADS valves is demonstrated to be operable. The ADS test circuit permits continued surveillance on the operable relief valves to assure that they will be available if required.

#### F. Minimum Low Pressure Cooling and Diesel Generator Availability

The purpose of Specification F is to assure that adequate core cooling equipment is available at all times. It is during refueling outages that major maintenance is performed and during such time that all low pressure core cooling systems may be out of service. This specification provides that should this occur, no work will be performed on the primary system which could lead to draining the vessel. This work would include work on certain control rod drive components and recirculation system. Thus, the specification precludes the events which could require core cooling. Since the system cannot be pressurized during refueling, the potential need for core flooding only exists and the specified combination of the core spray or the LPCI system can provide this. Specification 3.9 must also be consulted to determine other requirements for the diesel generators.

#### G. Maintenance of Filled Discharge Pipe

If the discharge piping of the core spray, LPCI subsystem, HPCI, and RCIC are not filled, a water hammer can develop in this piping when the pump and/or pumps are started. If a water hammer were to occur at the time at which the system were required, the system would still perform its design function. However, to minimize damage to the discharge piping and to ensure added margin in the operation of these systems, this Technical Specification requires the discharge lines to be filled whenever the system is in an operable condition.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 28 TO FACILITY LICENSE NO. DPR-44 AND  
AMENDMENT NO. 27 TO FACILITY LICENSE NO. DPR-56

PHILADELPHIA ELECTRIC COMPANY  
PEACH BOTTOM ATOMIC POWER STATION  
UNITS NOS. 2 AND 3  
DOCKETS NOS. 50-277 AND 50-278

Introduction

By letter dated October 5, 1976, Philadelphia Electric Company (PECO) requested an amendment to Facility Operating Licenses Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station Units Nos. 2 and 3. The proposed amendments would modify the Technical Specifications related to the Core Spray (CS) and Low Pressure Coolant Injection (LPCI) System injection valve open permissive setpoints, Recirculation Pump discharge valve (RPDV) closure setpoint and the minimum single LPCI pump flow rate. Additionally, by letter dated August 25, 1976 PECO requested an amendment to Facility Operating License No. DPR-56 for Peach Bottom Unit No. 3 that would incorporate revised limiting conditions for operation (LCO) and Surveillance requirements for the CS and LPCI Systems. These proposed changes were requested to conform the Peach Bottom Unit No. 3 Technical Specifications to those issued to Peach Bottom Unit No. 2 in Amendment No. 23, dated June 11, 1976.

Discussion

The existing requirements specify that the trip setting of the permissive for opening the CS and LPCI injection valves and closing of the RPDV are to be set in the range from 300 to 350 psig. The permissive function allows these valves to open or close after the set pressure is reached. The licensee proposes to change (1) the trip setting for the permissive for opening the CS and LPCI injection valves to a value in the range from 400 to 500 psig, (2) the trip setting for the permissive to close the RPDV to a value in the range from 200 to 250 psig, and (3) the required minimum single LPCI pump flow rate from 10,000 gpm to 10,900 gpm. These changes are necessary to assure that the values assumed in the most recent Emergency Core Cooling System (ECCS) analysis are conservatively bounded by the Technical Specifications.

In order to incorporate the changes in the CS, LPCI and RPDV actuation setpoints, minor plant modifications will be necessary. The existing pressure switches will be used to implement the proposed specification change by revising the contacts to separate the CS and LPCI low reactor pressure permissive function from the RPDV low reactor pressure permissive function and by recalibrating sections of the pressure switches. One section of the pressure switch will serve as the permissive for the LPCI and CS injection valve, while the other section will serve as the permissive for the RPDV's. There will be no change to the minimum number of operable instrument channels per trip system.

The licensee proposed that the changes in valve actuation pressure setpoints in Table 3.2.B of the Technical Specifications not become effective until the next shutdown of sufficient duration to allow implementation of the pressure switch wiring changes. As a conservative measure Peach Bottom Units Nos. 2 and 3 will be operated with a 2% reduction in the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) until these modifications are complete.

### Evaluation

#### Proposed Pressure Permissive Setpoints

The proposed changes in CS, LPCI and RPDV low pressure permissive setpoints are intended to conform the actual plant conditions to the values of these parameters assumed in the most recent ECCS analysis for Peach Bottom Units Nos. 2 and 3. The staff concludes, on this basis, that the proposed setpoints are acceptable and that their effects on ECCS performance have previously been reviewed and approved.<sup>1/</sup>

#### Modifications to Pressure Switches

The facility modifications proposed by the licensee to implement the revised trip settings will not introduce any new single failures of ECCS components. The modifications will be made in accordance with approved quality control and maintenance procedures and are therefore acceptable.

<sup>1/</sup> Amendment No. 15 to Facility Operating License No. DPR-44 for Peach Bottom Unit No. 2 dated November 28, 1975 and Amendment No. 14 to Facility Operating License No. DPR-56 for Peach Bottom Unit No. 3 dated January 29, 1976

### Effects on ECCS Performance

In view of the foregoing discussion of proposed setpoint changes, it is appropriate to this evaluation that the currently effective CS, LPCI and RPDV low reactor pressure permissive setpoints be evaluated for their effects on core reflood capability and ultimately on peak fuel clad temperature during a Loss of Coolant Accident (LOCA).

Since the LPCI injection valve opening time is faster (shorter) than the RPDV closing time and since no credit is taken in the ECCS analysis for LPCI flow until closure of the RPDV, operation of the LPCI injection valve at the current permissive setpoint of 300-350 psig instead of 450 psig has no effect on the LPCI system performance as assumed in the ECCS analysis. The present RPDV closing permissive setpoint (300-350 psig) is actually conservative from an ECCS performance standpoint because the valve will close earlier in the LOCA transient than assumed for ECCS calculations (the latter analysis assumed a closing permissive setpoint of 225 psig). Thus, the low pressure coolant injection flow could be available earlier, resulting in a shorter reflood time and reduced peak clad temperatures.

The ECCS analysis assumes an earlier CS injection valve opening than the current setpoint would allow, i.e., 450 psig was assumed and 300-350 psig is the current setting. However, the delay in opening caused by the present permissive trip level settings results in essentially no change in peak clad temperature. More specifically, the contribution from the CS system to the total reflood rate assumed in the analysis is a function of how soon the CS pumps can overcome the pressure head of the reactor vessel during the blowdown period. Since the rated head of the CS pumps is approximately 300 psig, the CS injection valve will be sufficiently open even at the current setpoint of 300-350 psig to deliver rated CS flow and will result in an insignificant delay in core reflood and essentially no increase in peak clad temperature. Therefore, the staff concludes that continued operation of Peach Bottom Units Nos. 2 and 3 with the currently effective CS, LPCI and RPDV low reactor pressure permissive setpoints is acceptable. Further, the staff concurs with the conservative action by the licensee to reduce MAPLHGR by 2 percent until the facility modifications proposed by PECO to correct the CS, LPCI and RPDV low reactor pressure permissive setpoints can be made.

### Revised LPCI Pump Flow

The correction of the minimum single LPCI pump flow rate from 10,000 gpm to 10,900 gpm was also proposed by the licensee to bring the Technical Specifications into conformance with the values assumed in the ECCS analysis. Peach Bottom Units Nos. 2 and 3 are currently operating with the single LPCI pump flow rate set to be greater than or equal to 10,900 gpm.

Thus, this change will require no facility modifications to incorporate and has no effect on ECCS performance and is, therefore, acceptable.

#### Revised CS and LPCI LCO and Surveillance Requirements

The revised LCO and Surveillance Requirements for the CS and LPCI systems were requested by the licensee to conform the Peach Bottom Unit No. 3 Technical Specifications with similar Technical Specifications implemented on Unit No. 2 by a previous amendment.<sup>2/</sup> The acceptability of these specifications was addressed in the safety evaluation supporting that amendment.

#### Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §1.5(d)(4), that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 15, 1976

<sup>2/</sup> Amendment No. 23 to Facility Operating License No. DPR-44 for Peach Bottom Unit No. 2 dated June 11, 1976.

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS 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 ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendments Nos. 28 and 27 to Facility Operating Licenses Nos. DPR-44 and DPR-56, respectively, issued to Philadelphia Electric Company, Public Service Electric and Gas Company, Delmarva Power and Light Company, and Atlantic City Electric Company, which revised Technical Specifications for operation of the Peach Bottom Atomic Power Station, Units Nos. 2 and 3, located in Peach Bottom, York County, Pennsylvania. The amendments are effective as of the date that modifications to the pressure actuation devices are completed.

These amendments will modify the Technical Specifications related to the Core Spray (CS) and Low Pressure Coolant Injection (LPCI) System injection valve open permissive setpoints, Recirculation Pump discharge valve (RPDV) closure setpoint and the minimum single LPCI pump flow rate.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

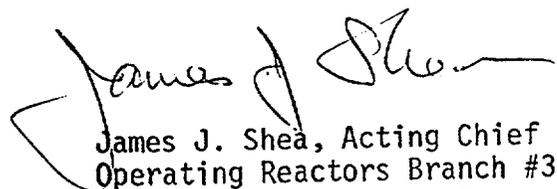
The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of these amendments.

For further details with respect to this action, see (1) the applications for amendments dated August 25, 1975 and October 5, 1976, (2) Amendments Nos. 28 and 27 to Licenses Nos. DPR-44 and DPR-56, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W. Washington, D. C. and at the Martin Memorial Library, 159 E. Market Street, York, Pennsylvania 17401.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 15 day of November 1976.

FOR THE NUCLEAR REGULATORY COMMISSION



James J. Shea, Acting Chief  
Operating Reactors Branch #3  
Division of Operating Reactors