October 2, 1989

Dockets Nos. 50-277/278

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BGrimes		

Mr. George A. Hunger, Jr.
Director-Licensing
Philadelphia Electric Company
Correspondence Control Desk
P. O. Box 7520
Philadelphia, Pennsylvania 19101

Dear Mr. Hunger:

SUBJECT: ADDITIONAL TRANSFORMER FOR OFFSITE POWER SUPPLY (TAC NOS. 72634/72635)

RE: PEACH BOTTOM ATOMIC POWER STATION, UNIT NOS. 2 AND 3

The Commission has issued the enclosed Amendments Nos. 149 and 152 to Facility Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Unit Nos. 2 and 3. These amendments consist of changes to the Technical Specifications in response to your application dated March 9, 1989.

These amendments would reflect installation of an additional transformer (the No. 343 startup transformer) to supply offsite power to the station.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

/s/

Robert E. Martin, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 149 to DPR-44
2. Amendment No. 152 to DPR-56
3. Safety Evaluation

cc w/enclosures:
See next page

[HUNGER]

Previously concurred*

PDI-2/LA	PDI-2/PM*	OGC	PDI-2/D*
MO'Brien	REMartin:tr		WButler
8/11/89	08/11/89	9/7/89	9/19/89

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

October 2, 1989

Dockets Nos. 50-277/278

Mr. George A. Hunger, Jr.
Director-Licensing
Philadelphia Electric Company
Correspondence Control Desk
P. O. Box 7520
Philadelphia, Pennsylvania 19101

Dear Mr. Hunger:

SUBJECT: ADDITIONAL TRANSFORMER FOR OFFSITE POWER SUPPLY
(TAC NOS. 72634/72635)

RE: PEACH BOTTOM ATOMIC POWER STATION, UNIT NOS. 2 AND 3

The Commission has issued the enclosed Amendments Nos. 149 and 152 to Facility Operating License Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Unit Nos. 2 and 3. These amendments consist of changes to the Technical Specifications in response to your application dated March 9, 1989.

These amendments would reflect installation of an additional transformer (the No. 343 startup transformer) to supply offsite power to the station.

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Sincerely,

Robert Martin

Robert E. Martin, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 149 to DPR-44
2. Amendment No. 152 to DPR-56
3. Safety Evaluation

cc w/enclosures:
See next page

cc:

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Washington, D.C. 20006

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Philadelphia Electric Company
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Peach Bottom Atomic Power Station
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Regional Administrator, Region I
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Mr. Albert R. Steel, Chairman
Board of Supervisors
Peach Bottom Township
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Engineering Division
ATTN: Chief Engineer
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Baltimore, MD 21202-3486

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Power Plant Research Program
Department of Natural Resources
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Tawes State Office Building
Annapolis, Maryland 21401

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. 149
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 March 9, 1989, 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. 149, 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

/s/
Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 2, 1989

PDI-2/LA MDBurden 8/11/89	PDI-2/PM REMartin 8/11/89	OGC 4/7/89	PDI-2/D WButler 9/9/89

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 149, 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

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 2, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 149

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
217	217
219	219
222	222

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9 AUXILIARY ELECTRICAL SYSTEM	4.9 AUXILIARY ELECTRICAL SYSTEM
Applicability:	Applicability:
Applies to the auxiliary electrical power system.	Applies to the periodic testing requirements of the auxiliary electrical systems.
Objective:	Objective:
To assure an adequate supply of electrical power for operation of those systems required for safety.	Verify the operability of the auxiliary electrical system.
Specification:	Specification:
A. Auxiliary Electrical Equipment	A. Auxiliary Electrical Equipment
The reactor shall not be made critical unless all of the following conditions are satisfied:	
1. Two physically independent circuits between the off-site transmission network and the on-site Class 1E distribution system are operable.	1. 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.
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.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS

3.9.B Operation with Inoperable Equipment

4.9.B

Whenever the reactor is in Run Mode or Startup Mode with the reactor not in a Cold Condition, the availability of electric power shall be as specified in 3.9.A, except as follows:

1. With one of the two independent off-site circuits required by Specification 3.9.A.1 inoperable, continued reactor operation is permissible for seven days. During this period, the four diesel generators and associated emergency buses must be demonstrated to be operable.

2. With two independent off-site circuits required by Specification 3.9.A.1 inoperable, continued operation is permissible, provided the four diesel generators and associated emergency buses are operable, all core and containment cooling systems are operable and reactor power level is reduced to 25% of the design.

3.9 BASES

The general objective of this Specification is to assure an adequate source of electrical power to operate the auxiliaries during plant operation, to operate facilities to cool and lubricate the plant during shutdown, and to operate the engineered safeguards following the accident. Two independent power sources from the off-site transmission network and the diesel generators are available. One off-site source is provided through the 13.2 kV startup regulating transformer switchgear No. 3 supplied from either the No. 343 startup transformer or the startup and emergency auxiliary regulating transformer No. 3. The other off-site source is provided through the 13.2 kV startup transformer switchgear No. 2 supplied from the startup and emergency auxiliary transformer No. 2. The two off-site sources are connected to the on-site Class 1E distribution system (which begins with the 4kV emergency buses) by physically independent circuits. The dc supply is required for switchgear and engineered safety feature systems. Specification 3.9.A states the required availability of ac and dc power; i.e., active off-site ac sources and the required amount of on-site ac and dc sources. The diesel fuel supply consists of four (4) 35,000 gallon tanks. A battery charger is supplied with each of the 125-Volt batteries.

The No. 2, No. 3 and No. 343 startup transformers and unit auxiliary transformers are each sized to carry 100% of the auxiliary load. If one of the off-site power circuits becomes inoperable, the unit can continue to operate since the unit auxiliary transformer is in service, the other off-site power circuit is available, and the required number of diesel generators is operational.

If both off-site power circuits are inoperable, the reactor power level must be reduced to a value whereby the units can safely reject the load and continue to supply auxiliary electric power to the station.

In the normal mode of operation, the No.2 startup transformer and either the No. 3 or No. 343 startup transformer are energized and four diesel generators are operable. One diesel generator may be allowed out-of-service based on the availability of power from the startup transformer and the fact that three diesel generators carry sufficient engineered safeguards equipment to cover all breaks. With one off-site power circuit and one diesel generator out-of-service, the off-site transmission line corresponding to the operable off-site power circuit must be available. Upon the loss of one on-site and one off-site power source, power would be available from the other immediate off-site power source and the three operable on-site diesels to carry sufficient engineered safeguards equipment to cover all breaks. In addition to these two power sources, removal of the Isolated Phase Bus "quick" disconnect links would allow backfeed of power through the main transformer to the unit auxiliary transformer and provide power to carry the full station auxiliary load. The time required to perform this operation is comparable to the time the reactor could remain on RCIC operation before controlled depressurization need be initiated.

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. 152
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 March 9, 1989, 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-56 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 152 , 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

/s/
Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 2, 1989

PDI-2/LA	PDI-2/PM	OGC	PDI-2/D
MO'Brien	REMartin		WButler
8/1/89	8/1/89	9/7/89	9/9/89

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 152, 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

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 2, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 152

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 areas are indicated by marginal lines.

Remove	Insert
217	217
219	219
222	222

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9 AUXILIARY ELECTRICAL SYSTEM	4.9 AUXILIARY ELECTRICAL SYSTEM
Applicability:	Applicability:
Applies to the auxiliary electrical power system.	Applies to the periodic testing requirements of the auxiliary electrical systems.
Objective:	Objective:
To assure an adequate supply of electrical power for operation of those systems required for safety.	Verify the operability of the auxiliary electrical system.
Specification:	Specification:
A. Auxiliary Electrical Equipment	A. Auxiliary Electrical Equipment
The reactor shall not be made critical unless all of the following conditions are satisfied:	
1. Two physically independent circuits between the off-site transmission network and the on-site Class 1E distribution system are operable.	1. 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.
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.	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.9.B Operation with Inoperable Equipment	4.9.B

Whenever the reactor is in Run Mode or Startup Mode with the reactor not in a Cold Condition, the availability of electric power shall be as specified in 3.9.A, except as follows:

1. With one of the two independent off-site circuits required by Specification 3.9.A.1 inoperable, continued reactor operation is permissible for seven days. During this period, the four diesel generators and associated emergency buses must be demonstrated to be operable.

2. With two independent off-site circuits required by Specification 3.9.A.1 inoperable, continued operation is permissible, provided the four diesel generators and associated emergency buses are operable, all core and containment cooling systems are operable and reactor power level is reduced to 25% of the design.

3.9 BASES

The general objective of this Specification is to assure an adequate source of electrical power to operate the auxiliaries during plant operation, to operate facilities to cool and lubricate the plant during shutdown, and to operate the engineered safeguards following the accident. Two independent power sources from the off-site transmission network and the diesel generators are available. One off-site source is provided through the 13.2 kV startup regulating transformer switchgear No. 3 supplied from either the No. 343 startup transformer or the startup and emergency auxiliary regulating transformer No. 3. The other off-site source is provided through the 13.2 kV startup transformer switchgear No. 2 supplied from the startup and emergency auxiliary transformer No. 2. The two off-site sources are connected to the on-site Class 1E distribution system (which begins with the 4kV emergency buses) by physically independent circuits. The dc supply is required for switchgear and engineered safety feature systems. Specification 3.9.A states the required availability of ac and dc power; i.e., active off-site ac sources and the required amount of on-site ac and dc sources. The diesel fuel supply consists of four (4) 35,000 gallon tanks. A battery charger is supplied with each of the 125-Volt batteries.

The No. 2, No. 3 and No. 343 startup transformers and unit auxiliary transformers are each sized to carry 100% of the auxiliary load. If one of the off-site power circuits becomes inoperable, the unit can continue to operate since the unit auxiliary transformer is in service, the other off-site power circuit is available, and the required number of diesel generators is operational.

If both off-site power circuits are inoperable, the reactor power level must be reduced to a value whereby the units can safely reject the load and continue to supply auxiliary electric power to the station.

In the normal mode of operation, the No.2 startup transformer and either the No. 3 or No. 343 startup transformer are energized and four diesel generators are operable. One diesel generator may be allowed out-of-service based on the availability of power from the startup transformer and the fact that three diesel generators carry sufficient engineered safeguards equipment to cover all breaks. With one off-site power circuit and one diesel generator out-of-service, the off-site transmission line corresponding to the operable off-site power circuit must be available. Upon the loss of one on-site and one off-site power source, power would be available from the other immediate off-site power source and the three operable on-site diesels to carry sufficient engineered safeguards equipment to cover all breaks. In addition to these two power sources, removal of the Isolated Phase Bus "quick" disconnect links would allow backfeed of power through the main transformer to the unit auxiliary transformer and provide power to carry the full station auxiliary load. The time required to perform this operation is comparable to the time the reactor could remain on RCIC operation before controlled depressurization need be initiated.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION SUPPORTING

AMENDMENT NOS. 149 AND 152 TO FACILITY OPERATING

LICENSE 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, UNIT NOS. 2 AND 3

DOCKET NOS. 50-277 AND 50-278

1.0 INTRODUCTION

By letter dated March 9, 1989, Philadelphia Electric Company requested an amendment to Facility Operating License Nos. DPR-44 and DPR-56 for Peach Bottom Atomic Power Station, Unit Nos. 2 and 3. These amendments to Technical Specification pages 217, 219 and 222 would reflect the installation of an additional transformer (the no. 343 startup transformer) to supply offsite power to the station. The amendment would eliminate uncertainty as to whether the new transformer is a permissible offsite source, would achieve more consistency with the Standard Technical Specifications for boiling water reactors and would include the additional transformer in the Bases.

2.0 EVALUATION

The station receives power from two separate off-site sources; one on the Unit 2 side and one on the Unit 3 side. The Unit 2 source is the 13.2 KV startup transformer switchgear No. 2 which is not directly affected by this amendment. The Unit 3 source is the 13.2 KV startup regulating transformer switchgear No. 3. Since installing the additional No. 343 transformer the no. 3 switchgear can receive power from either of two sources, the No. 343 transformer or the emergency auxiliary regulating transformer No. 3.

The No. 343 transformer was installed in 1985 to serve as an alternate to an existing transformer that had been exhibiting evidence of possible degradation and which subsequently failed in April 1986. The wording of the Technical Specification (TS) Limiting Condition for Operation (LCO) reflects the configuration of the system prior to the installation of the No. 343 transformer and by referring to specific pieces of equipment may

lead to confusion regarding the acceptability of either the No. 343 or the No. 3 transformer as a source for the No. 3 switchgear. Therefore the licensee has proposed to amend the LCO 3.9.A.1 language to refer to two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system without a reference to specific pieces of equipment. The licensee also proposes to make related changes to LCO 3.9.B.1 to provide more consistency with Standard Technical Specification language and thereby to clarify that with either the No. 343 or the No. 3 transformer inoperable, the other one constitutes an acceptable source for the No. 3 switchgear and does not require entering the LCO requirement for action. Corresponding changes are made to LCO 3.9.B.2 and to the associated BASES.

The staff agrees with the licensee that the amendment would provide a clarification regarding the acceptability of use of Transformer No. 343. Therefore it is the view of the staff that the change is only in the Technical Specification language, thus, making clear that either Transformer No. 343 or Transformer No. 3 may be used as the source of 220 KV power to the Start-up Regulating Transformer Switchgear No. 3.

The adequacy of Transformer No. 343 in this regard, was also the subject of a recent NRC staff inspection as reported in Inspection Report 50-277/89-07; 50-278/89-07. The staff found the use of Transformer No. 343 to be a proper and adequate substitute for Transformer No. 3. Therefore the staff considers the proposed change to the Technical Specification, which confirms that either the No. 343 or the No. 3 transformer constitutes an acceptable source for the switchgear No. 3, to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on September 26, 1989 (54 FR 39483). Accordingly, based upon the environmental assessment, the Commission has determined that the issuance of the amendments will not have a significant effect on the quality of the human environment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (54 FR 27235) on June 28, 1989 and consulted with the State of Pennsylvania. No public comments were received and the State of Pennsylvania did not have any comments.

The staff has 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Charles E. Morris

Dated: October 2, 1989