

REGULATORY DOCKET FILE COPY.

SEPTEMBER 17 1979

Docket Nos. 50-277
and 50-278 ✓

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

Dear Mr. Bauer:

The Commission has issued the enclosed Amendments Nos. 57 and 59 to Facility Operating Licenses Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station Units Nos. 2 and 3. The amendments revise the Technical Specifications in response to your request dated August 27, 1979.

These amendments revise the Technical Specifications to delete the restriction on fuel decay time prior to movement of fuel elements from the reactor vessel to the spent fuel pool.

Copies of the related Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,
Original Signed
T. A. Ippolito

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:

1. Amendment No. 59 to DPR-44
2. Amendment No. 59 to DPR-56
3. Safety Evaluation
4. Notice

cc w/enclosures: See page 2

cf. CAP

OFFICE →	ORB #3	ORB #2	AD:ORP	OELD	ORB #3
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DATE →	9/ /79	9/11/79	9/ /79	9/ /79	9/ /79

Mr. Edward G. Bauer, Jr.
Philadelphia Electric Company

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September 17, 1979

cc:

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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. 59
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 August 27, 1979, 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:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 59 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 17, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 59

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

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Insert

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LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

3.10.B (Cont'd.)

1. The SRM shall be inserted to the normal operating level. (Use of special movable, dunking type detectors during initial fuel loading and major core alterations in place of normal detectors is permissible as long as the detector is connected to the normal SRM circuit.)
2. The SRM shall have a minimum of 3 cps with all rods fully inserted in the core.

C. Spent Fuel Pool Water Level

Whenever irradiated fuel is stored in the spent fuel pool, the pool water level shall be maintained at or above 8 1/2' above the top of the fuel.

4.10.B (Cont'd.)

C. Spent Fuel Pool Water Level

Whenever irradiated fuel is stored in the spent fuel pool, the water level shall be recorded daily.



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. 59
License No. DPR-56

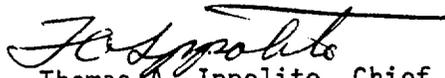
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Philadelphia Electric Company, et al. (the licensee) dated August 27, 1979, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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-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.59, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 17, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 59

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

228

Insert

228

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

3.10.B (Cont'd.)

1. The SRM shall be inserted to the normal operating level. (Use of special movable, dunking type detectors during initial fuel loading and major core alterations in place of normal detectors is permissible as long as the detector is connected to the normal SRM circuit.)
2. The SRM shall have a minimum of 3 cps with all rods fully inserted in the core.

C. Spent Fuel Pool Water Level

Whenever irradiated fuel is stored in the spent fuel pool, the pool water level shall be maintained at or above 8 1/2' above the top of the fuel.

4.10.B (Cont'd.)

C. Spent Fuel Pool Water Level

Whenever irradiated fuel is stored in the spent fuel pool, the water level shall be recorded daily.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 59 AND 59 TO FACILITY 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 UNITS NOS. 2 AND 3

DOCKETS NOS. 50-277 AND 50-278

1.0 INTRODUCTION

By its letter dated August 27, 1979, the Philadelphia Electric Company (PECO) applied for license amendments to change Technical Specification 3.10E from a single, 120 hour (five day) delay time prior to moving fuel to the spent fuel pool to an allowable discharge rate, which could commence as soon as twenty-four hours after the reactor is shut down. In PECO's proposal this allowable rate would be determined for each refueling from a set of graphs, to be included in the Technical Specifications. PECO calculated the data for these graphs on the basis that the temperature of the water coming out of the spent fuel pool should never exceed 150°F, even though only two of the three spent fuel cooling loops were operable at the time of the peak heat load.

2.0 SPENT FUEL COOLING

The spent fuel pool cooling systems at Peach Bottom consist of three pumps and three heat exchangers in parallel for each of the two reactors. Each of these three pumps is designed to pump 533 gpm (2.67×10^5 pounds per hour). Each heat exchanger is designed to transfer 3.75×10^6 BTU/hr from 115°F fuel pool water to 90°F service water, which is flowing through the heat exchanger at a rate of 4.0×10^5 pounds per hour.

3.0 EVALUATION

This Technical Specification and proposed change only pertain to normal refuelings. It does not affect or change the reactor cooling time when a full core complement of 764 fuel assemblies is transferred to the spent fuel pool. In that case, the fuel pool can be adequately cooled by the Residual Heat Removal System regardless of when the core is transferred.

In the graphs it submitted, PECO allowed for a range in the number of assemblies that may be unloaded in any refueling. The maximum number in this range is 338. The minimum reactor cooling time in these graphs is twenty four hours, which is the time it normally takes to cool the reactor down. The maximum fuel assembly discharge rate PECO considered is about 8 fuel assemblies per hour. From these data we calculated the

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maximum heat load for any refueling considered in the proposal to be about 21×10^6 BTU/hr. If we add to this the 3.3×10^6 BTU/hr which will be generated by 2320 spent fuel assemblies already in the pool, we get a total maximum refueling heat load of 24.3×10^6 BTU/hr. Assuming the conditions given in Section 2.0 Spent Fuel Cooling for this heat load, the temperature of the water coming out of the spent fuel pool would be about 144°F. If we were to use the measured temperature of the service water in lieu of the design basis 90°F, as suggested in PECO's submittal, and were to include the heat loss from the surface of the pool, this maximum temperature would be less than 140°F. Under the guidelines given in NRC Standard Review Plan 9.1.3, 140°F is a permissible maximum temperature for normal operation of the spent fuel pool cooling system.

In the event that one of the three loops were to fail at this peak load, we calculate that the temperature of the water coming out of the pool could go up to about 175°F in about four hours or so. Because of the low heat flux, the fuel element temperatures would still stay below 180°F, which is far below the 600°F or so at which the fuel elements were in the operating reactor. Thus one would expect that none of the fuel elements would be damaged by this gradual increase in temperature up to about 180°F. If none of the fuel elements are damaged the additional radioactivity that would be released from the site would be insignificant for this temporary, emergency situation. Thus, for the NRC objective of protecting the public health and safety this is an acceptable temperature for this failed condition.

From the above calculations, we find that PECO is in compliance with NRC regulations without adding these graphs to the Peach Bottom 2 and 3 Technical Specifications.

Our review considered the impact of eliminating the fuel decay time on the consequences of a fuel handling accident. Previous reviews assumed that this type event occurs 24 hours after shutdown (SER dated August 11, 1972). As discussed above, it normally takes at least this amount of time to cool the reactor. Thus, it is not possible to remove fuel earlier than 24 hours after shutdown. Accordingly, elimination of the restriction on fuel decay time has no impact on the evaluation of the fuel handling accident.

4.0 SUMMARY

The present Technical Specification 3.10E, which prohibits moving fuel at the Peach Bottom reactors prior to 120 hours (5 days) after shutdown, is not necessary to protect the health and safety of the public and may be deleted from the Technical Specifications based on our calculations of maximum heat loads in the fuel storage pool.

5.0 ENVIRONMENTAL CONSIDERATION

We have determined that the amendments do 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 amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

6.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: September 17, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS NOS. 50-277 AND 50-278

PHILADELPHIA ELECTRIC COMPANY, ET AL.

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 59 and 59 to Facility Operating License Nos. DPR-44 and DPR-56, 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 (the facility) located in York County, Pennsylvania. The amendments are effective as of the date of issuance.

The amendments revise the Technical Specifications to delete the restriction on fuel decay time prior to movement of fuel elements from the reactor vessel to the spent fuel pool.

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.

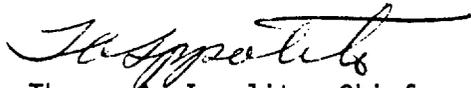
The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance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

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For further details with respect to this action, see (1) the application for amendments dated August 27, 1979, (2) Amendment Nos. 59 and 59 to License 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 Government Publications Section, State Library of Pennsylvania, Education Building, Commonwealth and Walnut Streets, Harrisburg, Pennsylvania. 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 17th day of September 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors