

September 27, 1996

Mr. George A. Hunger,
Director-Licensing, M-62A-1
PECO Energy Company
Nuclear Group Headquarters
Correspondence Control Desk
P.O. Box No. 195
Wayne, PA 19087-0195

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 2 (TAC NO. M95132)

Dear Mr. Hunger:

The Commission has issued the enclosed Amendment No. 217 to Facility Operating License No. DPR-44 for the Peach Bottom Atomic Power Station, Unit No. 2. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated March 25, 1996 as supplemented by your submittals dated August 23, 1996 and September 27, 1996.

This amendment revises TS 2.1.1.2 safety limit minimum critical power ratios (SL MCPRs) to be consistent with the use of GE-13 fuel in the Unit 2 core for operating cycle 12.

You are requested to inform the staff when you have implemented the provisions of this amendment. The requirement affects nine or fewer respondents and, therefore, is not subject to the Office of Management and Budget review under P.L. 96-511.

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/

Joseph W. Shea, Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-277

- Enclosures: 1. Amendment No. 217 to License No. DPR-44
- 2. Safety Evaluation

cc w/encls: See next page

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NAME	MO'Brien	JShea	APH	RJones	JStolz
DATE	9/27/96	9/27/96	9/27/96	9/27/96	9/27/96

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 27, 1996

Mr. George A. Hunger, Jr.
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Sincerely,

A handwritten signature in black ink, appearing to read "Joseph W. Shea".

Joseph W. Shea, Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-277

Enclosures: 1. Amendment No. 217 to
License No. DPR-44
2. Safety Evaluation

cc w/encs: See next page

Mr. George A. Hunger, Jr.
PECO Energy Company

Peach Bottom Atomic Power Station,
Units 2 and 3

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PECO ENERGY 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. 217
License No. DPR-44

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by PECO Energy Company, et al. (the licensee) dated March 25, 1996 as supplemented by letters dated August 23, 1996, and September 27, 1996, 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:

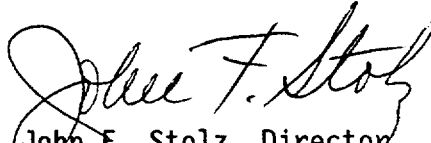
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 217, are hereby incorporated in the license. PECO Energy Company 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, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: September 27, 1996

ATTACHMENT TO LICENSE AMENDMENT NO.217

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 areas are indicated by marginal lines.

Remove

2.0-1

Insert

2.0-1

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

2.1.1.1 With the reactor steam dome pressure < 785 psig or core flow < 10% rated core flow:

THERMAL POWER shall be \leq 25% RTP.

* 2.1.1.2 With the reactor steam dome pressure \geq 785 psig and core flow \geq 10% rated core flow:

MCPR shall be \geq 1.11 for two recirculation loop operation or \geq 1.13 for single recirculation loop operation.

2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

2.1.2 Reactor Coolant System Pressure SL

Reactor steam dome pressure shall be \leq 1325 psig.

2.2 SL Violations

With any SL violation, the following actions shall be completed:

2.2.1 Within 1 hour, notify the NRC Operations Center, in accordance with 10 CFR 50.72.

2.2.2 Within 2 hours:

2.2.2.1 Restore compliance with all SLs; and

2.2.2.2 Insert all insertable control rods.

2.2.3 Within 24 hours, notify the Plant Manager and the Vice President - Peach Bottom Atomic Power Station.

(continued)

* MCPR values in TS 2.1.1.2 are applicable only for Cycle 12 operation



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 217 TO FACILITY OPERATING LICENSE NO. DPR-44

PECO ENERGY COMPANY
PUBLIC SERVICE ELECTRIC AND GAS COMPANY
DELMARVA POWER AND LIGHT COMPANY
ATLANTIC CITY ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 2

DOCKET NO. 50-277

1.0 INTRODUCTION

By letter dated March 25, 1996, as supplemented by letters dated August 23, 1996 and September 27, 1996, PECO Energy Company (the licensee) submitted a request for changes to the Peach Bottom Atomic Power Station, Unit Nos. 2 and 3, Technical Specifications (TSs). The requested changes would revise the safety limit minimum critical power ratio (SLMCPR) from 1.07 to 1.11 for two recirculation loop operation and from 1.08 to 1.13 for single recirculation loop operation to be consistent with use of GE-13 fuel for Peach Bottom Unit 2 Cycle 12 reload application. In a letter dated August 23, 1996, the licensee revised the March 25, 1996 submittal to reflect new SLMCPR values that were valid for the use of GE-13 fuel in the Unit 2 core for the duration of Unit 2 operating cycle 12. Therefore, this amendment is for the Unit 2 TSs only. The licensee is expected to revise the March 25, 1996 application to reflect appropriate values for Unit 3 in the future. The staff will consider revisions to the Unit 3 SLMCPR TS values at such time as a revised application is received.

In the September 27, 1996 letter, clarifying information was provided that did not change the initial proposed no significant hazards consideration determination nor the Federal Register notice.

2.0 EVALUATION

The licensee requested a change to the Peach Bottom Unit 2 Facility Operating License in accordance with the 10 CFR 50.90. The licensee proposed to revise Technical Specification 2.1.1 - Reactor Core Safety Limits (SLs) as described below.

The safety limit MCPR in TS 2.1.1.2 is proposed to change from 1.07 to 1.11 for two recirculation loop operation and from 1.08 to 1.13 for single loop operation based on the cycle-specific analysis performed by GE for Peach Bottom Unit 2 Cycle 12. Peach Bottom Unit 2 cycle-specific fuel

and core parameters were used including the actual core loading, conservative variations of projected control blade patterns, the actual bundle parameters, and the cycle exposure range.

The staff has reviewed the proposed TS changes which are based on the analyses performed using Peach Bottom Unit 2 cycle-specific inputs and approved methodologies including GESTAR II (NEDE-24011-P-A-11, Sections 1.1.5 and 1.2.5) and NEDO-10985-A, January 1977, for two loop operation and found them acceptable. Because the R-factor methodology referenced in NEDE-24011-P-A-11 is not applicable to the part length GE13 fuel, an improved R-factor methodology described in NEDC-32505P, "R-Factor Calculation Method for GE11, GE12 and GE13 Fuel", November 1995 was used. The improved R-factor calculation method uses the same NRC-approved equation stated in GESTAR (NEDE-24011-P-A) with the correction factors to account for the peaking factor effects due to the part-length-rod design. The staff has reviewed the R-factor calculation method for GE13 and finds it acceptable for application to the GE13 fuel in Peach Bottom Unit 2. A telephone conference was held on September 26, 1996 with PECO Energy and General Electric to clarify the cycle-specific analyses with respect to the cause of a 0.02 increase above the generic SLMCPR of 1.09 reported in the letter report "Safety Limit MCPR for GE13 Fuel," transmitted to the NRC by GE letter (JFK94-014) dated September 28, 1994 and the search procedure for variations of projected control blade patterns. The responses to this conference call are documented in the September 27, 1996 letter to U.S. NRC from G. Hunger, PECO.

Based on the above review, the staff concludes that the change to the SLMCPR Technical Specification is acceptable for the Peach Bottom Cycle 12 reload application since the changes are analyzed based on the NRC approved method using PBAPS Unit 2 cycle-specific inputs. To ensure that the TS clearly articulates that the proposed values are applicable only to Unit 2, cycle 12 operation, the staff added a footnote to TS page 2.0-1 stating the applicability of the SLMCPR values.

3.0 CHANGED CIRCUMSTANCES

As discussed in the Federal Register notice (61 FR 45997), the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the Federal Register a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

In a letter dated September 27, 1996, the licensee informed the staff that circumstances surrounding the restart of Unit 2 from the current refueling outage had changed since the start of the 30-day notice period. Originally, the licensee planned to restart the Unit after the expiration of the 30-day notice period. However, due to smoother than anticipated outage operations, the licensee stated that they were prepared to restart Unit 2 as early as midnight, September 28, 1996. Issuance of the amendment is necessary to ensure that applicable TS SLMCPR values are in place prior to exceeding the conditions under which the TS SLMCPR is required to be met. Holding the unit in a derated condition solely to achieve the full 30-day comment period would result in an unnecessary plant derate.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The Commission has evaluated the changes against the above standards and has concluded that:

- (1) The proposed TS [technical specification] changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The derivation of the cycle-specific SLMCPRs for incorporation into the TS, and its use to determine cycle-specific thermal limits, have been performed using USNRC [U.S. Nuclear Regulatory Commission]-approved methods as discussed in "General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A-11, and U.S. Supplement, NEDE-24011-P-A-11-US, November 17, 1995 and interim (reconfirmation) implementing procedures. This change in SLMCPRs cannot increase the probability or severity of an accident.

The basis of the SLMCPRs calculation is to ensure that greater than 99.9% of all fuel rods in the core avoid boiling transition if the limit is not violated. The new SLMCPRs preserve the existing margin to transition boiling and fuel damage in the event of a postulated accident. The fuel licensing acceptance criteria for the SLMCPR calculation apply to PBAPS, Unit 2, Cycle 12 in the same manner as they have applied previously. The probability of fuel damage is not increased. Therefore, the proposed TS changes do not involve an increase in the probability or consequences of an accident previously evaluated.

- (2) The proposed TS changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The SLMCPR is a TS numerical value, designed to ensure that transition boiling does not occur in 99.9% of all fuel rods in the core during the limiting postulated accident. It cannot create the possibility of any new type of accident. The new SLMCPRs are calculated using USNRC-approved methods ("General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A-11, and U.S. Supplement, NEDE-24011-P-A-11-US, November 17, 1995) and interim (reconfirmation) implementing procedures.

- (3) The proposed TS changes do not involve a significant reduction in a margin of safety.

The margin of safety as defined in the TS Bases will remain the same. The new SLMCPRs are calculated using USNRC-approved methods ("General Electric Standard Application for Reactor Fuel," NEDE-24011-P-A-11, and U.S. Supplement, NEDE-24011-P-A-11-US, November 17, 1996) and interim (reconfirmation) implementing procedures which are in accordance with the current fuel licensing criteria.

The SLMCPRs remain sufficient to ensure that greater than 99.9% of all fuel rods in the core will avoid boiling transition if the limit is not violated, thereby preserving the fuel cladding integrity. Therefore, the proposed TS changes do not involve a reduction in a margin of safety.

Based on the above consideration, including the staff's safety evaluation, the staff concludes that the amendment meets the standards set forth in 10 CFR 50.92 for a no significant hazards determination. Therefore, the staff has made a final determination that the proposed amendment involves no significant hazards consideration.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves 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 made a final finding that the amendment involves no significant hazards consideration. Accordingly, the amendment meets 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 the amendment.

7.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: THuang

Date: September 27, 1996