June 13, 1995

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

SUBJECT: SOURCE RANGE NEUTRON MONITORING REQUIREMENTS DURING REFUELING OPERATIONS, PEACH BOTTOM ATOMIC POWER STATION, UNIT NOS. 2 AND 3 (TAC NOS. M91868 AND M91869)

Dear Mr. Hunger:

The Commission has issued the enclosed Amendments Nos. 205 and 208 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 (TS) in response to your application dated March 16, 1995.

These amendments change the existing TS requirements for source range neutron monitoring equipment while in the refueling mode to requirements based on NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4."

You are requested to inform the staff when you have implemented the provisions of these amendments. 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 Nos. 50-277/50-278
Enclosures:
1. Amendment No. 205 to DPR-44
2. Amendment No. 208 to DPR-56
3. Safety Evaluation

cc w/encls:
See next page

DISTRIBUTION:

~~Docket File~~	MO'Brien	CGrimes
PUBLIC	JShea	RJones
PDI-2 Reading	OGC	ACRS(4)
SVarga	OPA	OC/LFDCB
JZwolinski	GHill(4)	CAnderson, RGN-I
JStolz	NGilles	

OFC	:PDI-2/LA	:PDI-2/PM	:OGC	:SRXB/C	:PDI-2/D	:
	BAC for CG 6/9/95		with changes	CP for ref		
NAME	:MO'Brien	:JShea	:	:RJones	:JStolz	:
	MOB	JSB	C Marco			
DATE	:6/12/95	:5/11/95	:5/17/95	:5/12/95	:6/13/95	:

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

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Docket Nos. 50-277/50-278

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1. Amendment No. 205 to DPR-44
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cc w/encls:
See next page

cc:

J. W. Durham, Sr., Esquire
Sr. V.P. & General Counsel
PECO Energy Company
2301 Market Street, S26-1
Philadelphia, Pennsylvania 19101

PECO Energy Company
ATTN: Mr. G. R. Rainey, Vice President
Peach Bottom Atomic Power Station
Route 1, Box 208
Delta, Pennsylvania 17314

PECO Energy Company
ATTN: Regulatory Engineer, A4-5S
Peach Bottom Atomic Power Station
Route 1, Box 208
Delta, Pennsylvania 17314

Resident Inspector
U.S. Nuclear Regulatory Commission
Peach Bottom Atomic Power Station
P.O. Box 399
Delta, Pennsylvania 17314

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Mr. Roland Fletcher
Department of Environment
201 West Preston Street
Baltimore, Maryland 21201

A. F. Kirby, III
External Operations - Nuclear
Delmarva Power & Light Company
P.O. Box 231
Wilmington, DE 19899

Mr. Rich R. Janati, Chief
Division of Nuclear Safety
Pennsylvania Department of
Environmental Resources
P. O. Box 8469
Harrisburg, Pennsylvania 17105-8469

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

Public Service Commission of Maryland
Engineering Division
Chief Engineer
6 St. Paul Centre
Baltimore, MD 21202-6806

Mr. Richard McLean
Power Plant and Environmental
Review Division
Department of Natural Resources
B-3, Tawes State Office Building
Annapolis, Maryland 21401

Mr. John Doering, Chairman
Nuclear Review Board
PECO Energy Company
965 Chesterbrook Boulevard
Mail Code 63C-5
Wayne, Pennsylvania 19087

Dr. Judith Johnsrud
National Energy Committee
Sierra Club
433 Orlando Avenue
State College, PA 16803

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. 205
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 16, 1995, 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. 205 , 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

Charles Rushbrook for

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: June 13, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 205

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
103	103
227	227
228	228
231	231
232	232

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.3.B Control Rods (Cont'd.)	4.3.B Control Rods (Cont'd.)
4. Control rods shall not be withdrawn for startup unless at least two source range channels have an observed count rate equal to or greater than three counts per second*.	4. Prior to control rod withdrawal for startup, verify that at least two source range channels have an observed count rate of at least three counts per second.*
5. During operation with limiting control rod patterns, as determined by the designated qualified personnel, either: a. Both RBM channels shall be operable, or b. Control rod withdrawal shall be blocked, or c. The operating power level shall be limited so that the MCPR will remain above the fuel cladding integrity safety limit assuming a single error that results in complete withdrawal of a single operable control rod.	5. When a limiting control rod pattern exists, an instrument functional test of the RBM shall be performed prior to withdrawal of the designated rod(s). * May be reduced provided at least three source range channels for startup have an observed count rate and a signal-to-noise ratio on or above the curve shown on Figure 3.3.1.
C. Scram Insertion Times	C. Scram Insertion Times
1. The average scram insertion time, based on the deenergization of the scram pilot valve solenoids as time zero, of all operable control rods in the reactor power operation condition shall be no greater than: % Inserted from Fully Withdrawn / Avg. Scram Insertion Times (sec) 5 / 0.375 20 / 0.90 50 / 2.0 90 / 3.5	1. After each refueling outage or after a reactor shutdown that is greater than 120 days, each control rod shall be scram time tested with the reactor steam dome pressure greater than or equal to 800 psig prior to exceeding 40% of Rated Power. Scram time testing is not required for control rods inserted per Specification 3.3.B.1.

LIMITING CONDITIONS FOR OPERATION	SURVEILLNACE REQUIREMENTS
3.10.A.5.b (Cont'd) directional control valves for remaining control rods shall be disarmed electrically and sufficient margin to criticality shall be demonstrated.	4.10.A
c. If maintenance is to be performed on two control rod drives, they must be separated by more than two control cells in any direction.	
d. An appropriate number of SRM's are available as defined in specification 3.10.B.	
6. Any number of control rods may be withdrawn or removed from the reactor core provided the following conditions are satisfied:	
a. The reactor mode switch is locked in the "refuel" position. The refueling interlock which prevents more than one control rod from being withdrawn may be bypassed on a withdrawn control rod after the fuel assemblies in the cell containing (controlled by) that control rod have been removed from the reactor core. All other refueling interlocks shall be operable.	
B. Core Monitoring	B. Core Monitoring
1. While in the refuel mode, except as specified in 3.10.B.2, 3.10.B.4, and 3.10.B.5, two SRMs shall be operable.	1. Prior to entering the refuel mode, and every 12 hours thereafter while in the refuel mode, a channel check shall be performed for each required SRM.
2. Only one SRM channel is required to be operable during spiral offload or reload when the fueled region includes only that SRM detector.	
3. For an SRM to be considered operable, the following conditions shall be satisfied:	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.10.B (Cont'd)	4.10.B (Cont'd)
a. The SRM shall be inserted to the normal operating level. (Use of special movable, dunking type detectors during 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. Prior to performing core alterations, and every 12 hours thereafter during core alterations, verify an operable SRM detector is located in: a. The fueled region; b. The core quadrant where core alterations are being performed, when the associated SRM is included in the fueled region; and c. A core quadrant adjacent to where core alterations are being performed, when the associated SRM is included in the fueled region. One SRM may be used to satisfy more than one requirement.
b. The SRM shall have a minimum of 3 cps with all rods fully inserted in the core, or have a count rate and signal-to-noise ratio within the limits of Figure 3.3.1.	3. Verify that at least 2 source range channels have an observed count rate of ≥3 cps, or, are within the limits of Figure 3.3.1: a. Prior to entering the refuel mode and every 24 hours thereafter while in the refuel mode; and b. Prior to performing core alterations, and every 12 hours thereafter while performing core alterations. This requirement is not required to be met with less than or equal to four fuel assemblies adjacent to the SRM and no other fuel assemblies in the associated core quadrant. Additionally, this requirement is not required to be met during spiral fuel unloading.
4. If one or more required SRMs are inoperable while in the refuel mode: a. Immediately suspend core alterations except for control rod insertion; and b. Immediately initiate action to fully insert all insertable control rods in core cells containing one or more fuel assemblies.	4. Prior to entering the refuel mode, and every 7 days thereafter while in the refuel mode, a channel functional test and determination of signal-to-noise ratio shall be performed for each required SRM.
5. The SRM minimum count rate is not required with all fuel removed from the core.	5. Prior to entering the refuel mode, and every 184 days thereafter while in the refuel mode, a channel calibration shall be performed for each required SRM.

3.10 BASES (Cont'd)

The requirements for SRM Operability during these core alterations assure sufficient core monitoring.

B. Core Monitoring

The SRM's are provided to monitor the core during periods of station shutdown and to guide the operator during refueling operations. The requirement of 3 counts per second* provides assurance that neutron flux is being monitored.

SRMs are required to provide monitoring of reactivity changes occurring in the reactor core. Because of the local nature of reactivity changes during refueling, adequate coverage is provided by requiring one SRM to be operable in the quadrant of the reactor core where core alterations are being performed, and the other SRM to be operable in an adjacent quadrant containing fuel. These requirements ensure that the reactivity of the core will be continuously monitored during core alterations.

In the refueling mode during an SRM centered spiral offload or reload, an SRM outside the fueled region is not required to be operable, since it is not capable of monitoring neutron flux in the fueled region of the core. Core alterations are allowed in a quadrant with no operable SRM in an adjacent quadrant provided the requirement that the bundles being spiral reloaded or spiral offloaded are all in a single fueled region containing at least one operable SRM. Spiral reloading and offloading encompass reloading or offloading a cell on the edge of a continuous fueled region (the cell can be reloaded or offloaded in any sequence).

During unloading of fuel, it is permissible to allow the SRM count rate to decrease below 3 cps. Since all fuel moves during core unloading will reduce reactivity, the lower number of counts will not present a hazard. Requiring the SRM's to be tested prior to and during the refuel mode and fuel removal assures that the SRM's will be operable.

C. Spent Fuel Pool Water Level

The intent of the Technical Specification is to provide, adequate water coverage for cooling and shielding at all times. With the water at elevation 233' (its normal operating level at the top of the pool weir), approximately 23 ft. of water is maintained above fuel stored in the spent fuel storage racks. They physical arrangement of the spent fuel pool overflow to the skimmer surge tanks may be adjusted such that the minimum operating water level provides 22 ft. of water coverage over irradiated fuel in the storage racks. For this reason, the specification for minimum water coverage has been established at 22 ft. This level provides adequate

* May be reduced provided the count rate and signal-to-noise ratio are on or above the curve shown in Figure 3.3.1.

water coverage for both shielding and cooling at all times, including during fuel movement. The minimum water coverage measurement is the distance between the top of the fuel rod plenum and the spent fuel pool water level at its lowest adjusted level. With the water maintained at the minimum level, there is sufficient water depth to ensure that any iodine released from a hypothesized fuel handling accident would be reduced to acceptable levels before it reached the refueling floor. There are no piping connections to the spent fuel pool at any lower elevation.

4.10 BASES

A. Refueling Interlocks

Complete functional testing of all refueling interlocks before any refueling outage will provide positive indication that the interlocks operate in the situations for which they were designed. By loading each hoist with a weight equal to the fuel assembly, positioning the refueling platform and withdrawing control rods, the interlocks can be subjected to valid operational tests. Where redundancy is provided in the logic circuitry, tests can be performed to assure that each redundant logic element can independently perform its function.

B. Core Monitoring

Requiring SRMs to be tested prior to and during refuel mode provides assurance that the SRMs will be maintained operable. The weekly functional test and signal to noise ratio verification ensures their continued operability.

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. 50-278

PEACH BOTTOM ATOMIC POWER STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 208
License No. DPR-56

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 16, 1995, 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. 208, 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

Charles Rushbrook for

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: June 13, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 208

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
103	103
227	227
228	228
231	231
232	232

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.3.B Control Rods (Cont'd.)	4.3.B Control Rods (Cont'd.)
4. Control rods shall not be withdrawn for startup unless at least two source range channels have an observed count rate equal to or greater than three counts per second*.	4. Prior to control rod withdrawal for startup, verify that at least two source range channels have an observed count rate of at least three counts per second.*
5. During operation with limiting control rod patterns, as determined by the designated qualified personnel, either: a. Both RBM channels shall be operable, or b. Control rod withdrawal shall be blocked, or c. The operating power level shall be limited so that the MCPR will remain above the fuel cladding integrity safety limit assuming a single error that results in complete withdrawal of a single operable control rod.	5. When a limiting control rod pattern exists, an instrument functional test of the RBM shall be performed prior to withdrawal of the designated rod(s). * May be reduced provided at least three source range channels for startup have an observed count rate and a signal-to-noise ratio on or above the curve shown on Figure 3.3.1.
C. Scram Insertion Times	C. Scram Insertion Times
1. The average scram insertion time, based on the deenergization of the scram pilot valve solenoids as time zero, of all operable control rods in the reactor power operation condition shall be no greater than: % Inserted from Fully Withdrawn / Avg. Scram Insertion Times (sec) 5 / 0.375 20 / 0.90 50 / 2.0 90 / 3.5	1. After each refueling outage or after a reactor shutdown that is greater than 120 days, each control rod shall be scram time tested with the reactor steam dome pressure greater than or equal to 800 psig prior to exceeding 40% of Rated Power. Scram time testing is not required for control rods inserted per Specification 3.3.B.1.

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d. An appropriate number of SRM's are available as defined in specification 3.10.B.	
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B. Core Monitoring	B. Core Monitoring
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b. The SRM shall have a minimum of 3 cps with all rods fully inserted in the core, or have a count rate and signal-to-noise ratio within the limits of Figure 3.3.1.	
4. If one or more required SRMs are inoperable while in the refuel mode:	
a. Immediately suspend core alterations except for control rod insertion; and	
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5. The SRM minimum count rate is not required with all fuel removed from the core.	
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	a. The fueled region;
	b. The core quadrant where core alterations are being performed, when the associated SRM is included in the fueled region; and
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	One SRM may be used to satisfy more than one requirement.
	3. Verify that at least 2 source range channels have an observed count rate of ≥3 cps, or, are within the limits of Figure 3.3.1:
	a. Prior to entering the refuel mode and every 24 hours thereafter while in the refuel mode; and
	b. Prior to performing core alterations, and every 12 hours thereafter while performing core alterations.
	This requirement is not required to be met with less than or equal to four fuel assemblies adjacent to the SRM and no other fuel assemblies in the associated core quadrant. Additionally, this requirement is not required to be met during spiral fuel unloading.
	4. Prior to entering the refuel mode, and every 7 days thereafter while in the refuel mode, a channel functional test and determination of signal-to-noise ratio shall be performed for each required SRM.
	5. Prior to entering the refuel mode, and every 184 days thereafter while in the refuel mode, a channel calibration shall be performed for each required SRM.

3.10 BASES (Cont'd)

The requirements for SRM Operability during these core alterations assure sufficient core monitoring.

B. Core Monitoring

The SRM's are provided to monitor the core during periods of station shutdown and to guide the operator during refueling operations. The requirement of 3 counts per second* provides assurance that neutron flux is being monitored.

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water coverage for both shielding and cooling at all times, including during fuel movement. The minimum water coverage measurement is the distance between the top of the fuel rod plenum and the spent fuel pool water level at its lowest adjusted level. With the water maintained at the minimum level, there is sufficient water depth to ensure that any iodine released from a hypothesized fuel handling accident would be reduced to acceptable levels before it reached the refueling floor. There are no piping connections to the spent fuel pool at any lower elevation.

4.10 BASES

A. Refueling Interlocks

Complete functional testing of all refueling interlocks before any refueling outage will provide positive indication that the interlocks operate in the situations for which they were designed. By loading each hoist with a weight equal to the fuel assembly, positioning the refueling platform and withdrawing control rods, the interlocks can be subjected to valid operational tests. Where redundancy is provided in the logic circuitry, tests can be performed to assure that each redundant logic element can independently perform its function.

B. Core Monitoring

Requiring SRMs to be tested prior to and during refuel mode provides assurance that the SRMs will be maintained operable. The weekly functional test and signal to noise ratio verification ensures their continued operability.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 205 AND 208 TO FACILITY OPERATING

LICENSE NOS. DPR-44 and DPR-56

PECO ENERGY 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 16, 1995, the PECO Energy Company (the licensee) submitted a request for changes to the Peach Bottom Atomic Power Station, Unit Nos. 2 and 3, (PBAPS) Technical Specifications (TS). The requested changes would revise TS requirements for source range neutron monitoring equipment while in the refueling mode to requirements based on NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4."

2.0 EVALUATION

2.1 Background

PBAPS is equipped with source range monitoring (SRM) instrumentation which provides the operator with information relative to the neutron flux level at very low flux levels in the core. As such, the SRM indication is used by the operator to monitor the approach to criticality and determine when criticality is achieved.

The SRM subsystem of the Neutron Monitoring System (NMS) consists of four channels. Each channel includes one detector that can be physically positioned in the core. Each detector assembly consists of a miniature fission chamber with associated cabling, signal conditioning equipment, and electronics associated with the various SRM functions. The signal conditioning equipment converts the current pulses from the fission chamber to analog DC currents that correspond to the count rate. Each channel also includes indication, alarm, and control rod blocks.

The SRMs are maintained fully inserted until the count rate is greater than a minimum allowed count rate (a control rod block is set at this condition).

After SRM to intermediate range monitor (IRM) overlap is demonstrated, the SRMs are normally fully withdrawn from the core.

During refueling, shutdown, and low power operations, the primary indication of neutron flux levels is provided by the SRMs or special movable detectors connected to the normal SRM circuits. The SRMs provide monitoring of reactivity changes during fuel or control rod movement and give the control room operator early indication of unexpected subcritical multiplication that could be indicative of an approach to criticality.

The SRMs have no safety function and are not assumed to function during any updated final safety analysis report (UFSAR) design basis accident or transient analysis. However, the SRMs provide the only on-scale monitoring of neutron flux levels during startup and refueling.

2.2 Technical Specification Changes

SRM operability and surveillance requirements during the refueling mode are addressed in several sections of the existing PBAPS TS. TS 3.3.B.4\4.3.B.4, "Control Rods" specify SRM operability and surveillance requirements in conjunction with control rod withdraw during startup and refueling conditions. TS 3.10.B\4.10.B provides more detailed SRM operability requirements during refueling and core alteration operation. The current TS require that, except under certain conditions, two SRMs shall be operable, one in the core quadrant where fuel is being moved and one in the adjacent quadrant. Current Section 3.10.B\4.10.B also specifies surveillance requirements for the SRMs as well as SRM performance criteria for determining operability.

The licensee has proposed several changes to the existing TS SRM requirements. The proposed changes are consistent with the SRM requirements included in PECO's application to convert to a new set of TS that are based on NUREG-1433, Standard Technical Specifications General Electric Plants, BWR/4." The Peach Bottom Improved TS (ITS) application was filed September 29, 1994 and is currently under staff review. The licensee has proposed to adopt ITS SRM requirements in advance of its implementation of the ITS, which is expected in December 1995. Specific changes to the current TS are detailed below.

1. The licensee proposed to eliminate reference to SRM requirements during refueling in Section 3.3.B.4\4.3.B.4 and move such requirements to new TS 4.10.B.3.

2. The licensee proposed to renumber the existing 3.10.B.1 requirements for determining an operable SRM as TS 3.10.B.3

3. The licensee proposed to revise existing TS 3.10.B.1 to specify that, except under certain conditions in TS 3.10.B.2, 3.10.B.4 and 3.10.B.5, two SRMs are required to be operable in the refuel mode. Special exceptions to this requirement are:

a) TS 3.10.B.2 - only one SRM is required to be operable during spiral offload or reload operations when the fueled region includes only that SRM detector;

b) TS 3.10.B.4 - specifies actions to be taken if one or more required SRMs are inoperable while in the refuel mode. These actions include immediate suspension of core alterations except control rod insertion and immediate full insertion of all insertable control rods in core cells containing one or more fuel assemblies;

c) TS 3.10.B.5 - specifies that minimum SRM count rate requirements are not required if all fuel is removed from the core.

4. The licensee proposed to revise and renumber the requirements for considering an SRM operable. The revised requirements are listed in new TS 3.10.B.3. To be considered operable, the SRM shall be fully inserted to the normal operating level and shall have a minimum count rate of 3 counts per second (cps) with all rods inserted or shall have a count rate and signal to noise ratio (SNR) within the limits specified in TS Figure 3.3.1.

5. The licensee proposed to replace current TS requirements to perform a functional test for neutron response prior to core alterations and daily thereafter are being replaced with new TS 4.10.B.1 and 4.10.B.4. The proposed TS require performance of an SRM channel check prior to entering the refueling mode and every 12 hours thereafter and performance of a channel functional test and SNR determination prior to entering the refuel mode and every seven days thereafter.

6. The licensee proposed to add surveillance requirements 4.10.B.2 and 4.10.B.3 to verify that SRMs required to be operable are, in fact operable. These requirements are to be performed prior to core alterations and every 12 hours thereafter. In addition, minimum count rate determinations in new TS 4.10.B.3.a are required to be performed prior to entering the refueling mode and every 24 hours thereafter.

7. The licensee proposed to add TS 4.10.B.5 which requires performance of an SRM channel calibration prior to entering the refuel mode and every 184 days thereafter while in the refuel mode.

8. The licensee proposed to revise the TS bases to reflect the changed SRM operability and surveillance requirements.

2.3 Evaluation

The staff reviewed the licensee's proposed changes. With regard to the number of SRM channels required to be operable when in the refuel mode, the licensee proposed to require two SRM channels operable at all times except during spiral reload operations and when no fuel is in the reactor core. In its September 29, 1994 ITS application, the licensee noted that in the refuel mode during a spiral offload or reload, an SRM outside the fueled region is not capable of monitoring neutron flux in the fueled region of the core. Spiral reloading and offloading encompass reloading or offloading a cell on the edge of a continuous fueled region (the cell can be reloaded or offloaded in any sequence). Under these circumstances, the requirement to have operable SRMs in adjacent quadrants is not necessary to provide adequate monitoring of reactivity changes occurring in the reactor core to provide adequate monitoring of reactivity changes occurring in the reactor core.

In nonspiral routine operations, two SRMs are required to be operable to provide redundant monitoring of reactivity changes occurring in the reactor core. Because of the local nature of reactivity changes during refueling, adequate coverage is provided by requiring one SRM to be operable in the quadrant of the reactor core where core alteration is being performed, and the other SRM to be operable in an adjacent quadrant containing fuel. These requirements ensure that the reactivity of the core will be continuously monitored during core alterations.

The staff reviewed the licensee's proposed TS surveillance requirements. The staff noted that the most significant change to the existing TS was the elimination of the requirement to perform SRM response checks daily during core alteration operations. The licensee proposed to implement a functional test and channel check prior to entering the refueling mode, a channel check every 24 hours during operation in the refueling mode, a channel check every 12 hours during core alteration operations and a functional test every seven days in the refuel mode.

In the September 29, 1994 ITS application, the licensee justified the seven day functional test frequency by stating that: "This Frequency is reasonable, based on operating experience and on other Surveillance (such as a CHANNEL CHECK), that ensure proper functioning between CHANNEL FUNCTIONAL TESTS." The staff agrees that the combination of periodic SRM functional tests and channel checks during refueling operations provide adequate confirmation of required SRM operability.

The staff reviewed the remainder of the licensee's proposed changes and determined that they enhanced or improved the existing TS requirements by improving the format or implementing more structured surveillance requirements.

The staff finds that the proposed TS provide adequate controls on the number of required operable SRMs during operation in the refueling mode including

various core alteration operations. The staff also finds that the proposed surveillance requirements, including functional and channel check requirements, provide adequate confirmation of required SRM operability. The staff further noted that the licensee's proposed changes are consistent with SRM requirements for Mode 5 (refueling mode) in NUREG-1433. Based on the above considerations, the staff concludes that the proposed TS changes are acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 24913). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

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

Principal Contributor: J. Shea

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