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Posted Amdt. 121 to DPR-26

Dockets Nos. 50-277
and 50-278

MAR 14 1986

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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. 117 and 121 to Facility Operating Licenses Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Units Nos. 2 and 3. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated July 17, 1985.

The changes to the TSs permit the bypassing of a scram signal for main steam line isolation (MSIV) closure or main low vacuum while not in the "RUN" mode.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next Biweekly Federal Register notice.

Sincerely,

Original signed by

Gerald E. Gears, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:
1. Amendment No. 117 to DPR-44
2. Amendment No. 121 to DPR-56
3. Safety Evaluation

cc w/enclosures:
See next page

DBL:PD#2	DBL:PD#2	OELD	DBL:PD#2:D
SNorris:nc	GGears	L Fiekelstein	DMuller
2/21/85	2/27/85	3/4/85	3/13/85

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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. 117
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 July 17, 1985 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 117, 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

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 14, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 117

FACILITY OPERATING LICENSE NO. DPR-44

DOCKET NO. 50-277

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
7	7
8	8
38	38
39	39
42	42
45	45
49	49
62	62
63	63
	63a
80	80

1.0 DEFINITIONS (Cont'd)

outage, the required surveillance testing need not be performed until the next regularly scheduled outage.

Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

Run Mode - In this mode the reactor system pressure is at or above 850 psig and the reactor protection system is energized with APRM protection (excluding the 15% high flux trip) and RBM interlocks in service.

Safety Limit - The safety limits are limits below which the reasonable maintenance of the cladding and primary systems are assured. Exceeding such a limit requires unit shutdown and review by the Nuclear Regulatory Commission before resumption of unit operation. Operation beyond such a limit may not in itself result in serious consequences, but it indicates an operational deficiency subject to regulatory review.

Secondary Containment Integrity - Secondary Containment integrity means that the reactor building is intact and the following conditions are met:

1. At least one door in each access opening is closed.
2. The standby gas treatment is operable.
3. All Reactor Building ventilation system automatic isolation valves are operable or deactivated in the isolation position.

Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

Shutdown Mode - Placing the mode switch to the shutdown position initiates a reactor scram and power to the control rod drives is removed. After a short time period (about 10 sec), the scram signal is removed allowing a scram reset and restoring the normal valve lineup in the control rod drive hydraulic system; also, the main steam line isolation scram and main condenser low vacuum scram are bypassed.

1.0 DEFINITIONS (Cont'd)

Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

SITE BOUNDARY - That line beyond which the land is not owned, leased or otherwise controlled by licensee.

Source Check - A source check shall be the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.

Startup/Hot Standby Mode - In this mode the reactor protection scram trips, initiated by condenser low vacuum and main steam line isolation valve closure are bypassed, the reactor protection system is energized with IRM neutron monitoring system trip, the APRM 15% high flux trip, and control rod withdrawal interlocks in service. This is often referred to as just Startup Mode. This is intended to imply the Startup/Hot Standby position of the mode switch.

Surveillance Frequency - Periodic surveillance tests, checks calibrations, and examinations shall be performed within the specified surveillance intervals. The operating cycle interval as pertaining to instrument and electrical surveillance shall not exceed 18 months. These specified time intervals may be exceeded by 25%. In cases where the elapsed interval has exceeded 100% of the specified interval, the next surveillance interval shall commence at the end of the original specified interval. Surveillance tests are not required on systems or parts of the systems that are not required to be operable or are tripped. If tests are missed on parts not required to be operable or are tripped, then they shall be performed prior to returning the system to an operable status.

Transition Boiling - Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.

Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate

Table 3.1.1 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION REQUIREMENT

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting	Modes in which Function Must be Operable			Number of Instrument Channels Provided by Design	Action (1)
			Refuel (7)	Startup	Run		
2	High Water Level in Scram Discharge Instrument Volume	≤50 Gallons	X(2)	X	X	4 Instrument Channels	A
2	Turbine Condenser Low Vacuum	≥23 in. Hg. Vacuum			X	4 Instrument Channels	A or C
2	Main Steam Line High Radiation	≤3 X Normal Full Power Background	X	X	X	4 Instrument Channels	A
4	Main Steam Line Isolation Valve Closure	≤10% Valve Closure			X(6)	8 Instrument Channels	A
2	Turbine Control Valve Fast Closure	500<P<850 psig Control Oil Pressure Between Fast Closure Solenoid and Disc Dump Valve			X(4)	4 Instrument Channels	A or D
4	Turbine Stop Valve Closure	≤10% Valve Closure			X(4)	8 Instrument Channels	A or D

NOTES FOR TABLE 3.1.1

1. There shall be two operable or tripped trip systems for each function. If the minimum number of operable sensor channels for a trip system cannot be met, the affected trip system shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.

   A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.

   B. Reduce power level to IRM range and place mode switch in the start up position within 8 hours.

   C. Reduce turbine load and close main steam line isolation valves within 8 hours.

   D. Reduce power to less than 30% rated.

2. Permissible to bypass, in refuel and shutdown positions of the reactor mode switch.

3. Deleted.

4. Bypassed when turbine first stage pressure is less than 220 psig or less than 30% of rated.

5. IRM's are bypassed when APRM's are onscale and the reactor mode switch is in the run position.

6. The design permits closure of any two lines without a scram being initiated.

7. When the reactor is subcritical and the reactor water temperature is less than 212 degrees F, only the following trip functions need to be operable:

   A. Mode switch in shutdown

   B. Manual scram

   C. High flux IRM

   D. Scram discharge instrument volume high level

8. Not required to be operable when primary containment integrity is not required.

9. Not required to be operable when the reactor pressure vessel head is not bolted to the vessel.

TABLE 4.1.1 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT FUNCTIONAL TESTS
MINIMUM FUNCTIONAL TEST FREQUENCIES FOR SAFETY INSTRUMENT AND CONTROL CIRCUITS

	Group (2)	Functional Test	Minimum Frequency (3)
High Water Level in Scram Discharge Instrument Volume	A	Trip Channel and Alarm	Every 1 month.
Turbine Condenser Low Vacuum (6)	B2	Trip Channel and Alarm (4)	Every 1 month (1).
Main Steam Line High Radiation	B1	Trip Channel and Alarm (4)	Once/week.
Main Steam Line Isolation Valve Closure	A	Trip Channel and Alarm	Every 1 month (1).
Turbine Control Valve EHC Oil Pressure	A	Trip Channel and Alarm	Every 1 month.
Turbine First Stage Pressure Permissive	A	Trip Channel and Alarm	Every 3 months (1).
Turbine Stop Valve Closure	A	Trip Channel and Alarm	Every 1 month (1).

TABLE 4.1.2 (Cont'd.)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT CALIBRATION
MINIMUM CALIBRATION FREQUENCIES FOR REACTOR PROTECTION INSTRUMENT CHANNELS

Instrument Channel	Group (1)	Calibration (4)	Minimum Frequency (2)
Turbine Control Valve Fast Closure Oil Pressure Trip	A	Standard Pressure Source	Once per operating cycle.
Turbine Stop Valve Closure	A	Note (5)	Note (5)

3.1 BASES (Cont'd)

the amount of water which must be accommodated during a scram.

During normal operation the discharge volume is empty; however, should it fill with water, the water discharged to the piping from the reactor could not be accommodated which would result in slow scram times or partial control rod insertion. To preclude this occurrence, level switches have been provided in the instrument volume which alarm and scram the reactor when the volume of water reaches 50 gallons. As indicated above, there is sufficient volume in the piping to accommodate the scram without impairment of the scram times or amount of insertion of the control rods. This function shuts the reactor down while sufficient volume remains to accommodate the discharged water and precludes the situation in which a scram would be required but not be able to perform its function adequately.

A source range monitor (SRM) system is also provided to supply additional neutron level information during start-up but has no scram functions (reference paragraph 7.5.4 FSAR). Thus, the IRM and APRM are required in the "Refuel" and "Start/Hot Standby" modes. In the power range the APRM system provides required protection (reference paragraph 7.5.7 FSAR). Thus the IRM System is not required in the "Run" mode. The APRM's cover only the power range. The IRM's and APRM's provide adequate coverage in the start-up and intermediate range.

The high reactor pressure, high drywell pressure, reactor low water level and scram discharge volume high level scrams are required for Startup and Run modes of plant operation. They are, therefore, required to be operational for these modes of reactor operation.

The requirement to have the scram functions indicated in Table 3.1.1 operable in the Refuel mode assures that shifting to the Refuel mode during reactor power operation does not diminish the protection provided by the reactor protection system.

The turbine condenser low vacuum scram is only required during power operation and must be bypassed to start up the unit. The main condenser low vacuum trip is bypassed except in the run position of the mode switch.

Turbine stop valve closure occurs at 10% of valve closure. Below 220 psig turbine first stage pressure (30% of rated), the scram signal due to turbine stop valve closure is bypassed because the flux and pressure scrams are adequate to protect the reactor.

TABLE 3.2.A

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

Minimum No. of Operable Instrument Channels per Trip System (1)	Instrument	Trip Level Setting	Number of Instrument Channels Provided By Design	Action (2)
2	Main Steam Line Leak Detection High Temperature	≤ 200 Deg. F	4 Inst. Channels	B
1	Reactor Cleanup System High Flow	≤ 300% of Rated Flow	2 Inst. Channels	C
1	Reactor Cleanup System High Temperature	≤ 200 Deg. F.	1 Inst. Channels	E
2	Reactor Pressure (Feedwater Flush System Interlock)	≤ 600 psig	4 Inst. Channels	F

NOTES FOR TABLE 3.2.A

1. Whenever Primary Containment integrity is required by Section 3.7, there shall be two operable or tripped trip systems for each function.

2. If the first column cannot be met for one of the trip systems, that trip system shall be tripped or the appropriate action listed below shall be taken:

   A. Initiate an orderly shutdown and have the reactor in Cold Shutdown Condition in 24 hours.

   B. Initiate an orderly load reduction and have Main Steam Lines isolated within eight hours.

   C. Isolate Reactor Water Cleanup System.

   D. Isolate Shutdown Cooling.

   E. Isolate Reactor Water Cleanup Filter Demineralizers unless the following provision is satisifed. The RWCU Filter Demineralizer may be used (the isolation overridden) to route the reactor water to the main condenser or waste surge tank, with the high temperature trip inoperable for up to 48 hours, provided the water inlet temperature is monitored once per hour and confirmed to be below 180 degreef F.

   F. Isolate Feedwater Flush System

3. Instrument setpoint corresponds to 538 inches above vessel zero.

4. Instrument setpoint corresponds to 378 inches above vessel zero.

5. Two required for each steam line.

6. These signals also start SBGTS and initiate secondary containment isolation.

7. Only required in Run Mode (interlocked with Mode Switch).

8. At a radiation level of 1.5 times the normal rated power background, an alarm will be tripped in the control room to alert the control room operators to an increase in the main steam line tunnel radiation level.

NOTES FOR TABLE 3.2.A (Continued)

9. In the event of a loss of ventilation in the main steam line tunnel area, the main steam line tunnel exhaust duct high temperature setpoint may be raised up to 250 degrees F for a period not to exceed 30 minutes to permit restoration of the ventilation flow. During the 30 minute period, an operator shall observe control room indications of the duct temperature so in the event of rapid increases (indicative of a steam line break) the operator shall promptly close the main steam line isolation valves.

Amendment No. 30, 111

TABLE 4.2.A

MINIMUM TEST AND CALIBRATION FREQUENCY FOR PCIS

	Instrument Channel (5)	Instrument Functional Test	Calibration Frequency	Instrument Check
1)	Reactor High Pressure (Shutdown Cooling Permissive)	(1)	Once/3 months	None
2)	Reactor Low-Low-Low Water Level (7)	(1)(3)	Once/operating cycle	Once/day
3)	Main Steam High Temp.	(1)(3)	Once/operating cycle	Once/day
4)	Main Steam High Flow (7)	(1)(3)	Once/operating cycle	Once/day
5)	Main Steam Low Pressure	(1)	Once/3 months	None
6)	Reactor Water Cleanup High Flow	(1)	Once/3 months	Once/day
7)	Reactor Water Cleanup High Temp.	(1)	Once/3 months	None
8)	Reactor Pressure (Feedwater Flush Permissive)	(1)(3)	Once/operating cycle	Once/day

	Logic System Functional Test (4) (6)	Frequency
1)	Main Steam Line Isolation Vvs. Main Steam Line Drain Vvs. Reactor Water Sample Vvs.	Once/6 months
2)	RHR - Isolation Vv. Control Shutdown Cooling Vvs. Head Spray	Once/6 months
3)	Reactor Water Cleanup Isolation	Once/6 months
4)	Drywell Isolation Vvs. TIP Withdrawal Atmospheric Control Vvs. Sump Drain Valves	Once/6 months
5)	Standby Gas Treatment System Reactor Building Isolation	Once/6 months

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. 121
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 July 17, 1985, 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 121, 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

Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical Specifications

Date of Issuance: March 14, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 121

FACILITY OPERATING LICENSE NO. DPR-56

DOCKET NO. 50-278

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
7	7
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38	38
39	39
42	42
45	45
49	49
62	62
63	63
	63a
80	80

1.0 DEFINITIONS (Cont'd)

outage, the required surveillance testing need not be performed until the next regularly scheduled outage.

Reportable Event - A reportable event shall be any of those conditions specified in Section 50.73 to 10 CFR Part 50.

Run Mode - In this mode the reactor system pressure is at or above 850 psig and the reactor protection system is energized with APRM protection (excluding the 15% high flux trip) and RBM interlocks in service.

Safety Limit - The safety limits are limits below which the reasonable maintenance of the cladding and primary systems are assured. Exceeding such a limit requires unit shutdown and review by the Nuclear Regulatory Commission before resumption of unit operation. Operation beyond such a limit may not in itself result in serious consequences, but it indicates an operational deficiency subject to regulatory review.

Secondary Containment Integrity - Secondary Containment integrity means that the reactor building is intact and the following conditions are met:

1. At least one door in each access opening is closed.
2. The standby gas treatment is operable.
3. All Reactor Building ventilation system automatic isolation valves are operable or deactivated in the isolation position.

Shutdown - The reactor is in a shutdown condition when the reactor mode switch is in the shutdown mode position and no core alterations are being performed.

Shutdown Mode - Placing the mode switch to the shutdown position initiates a reactor scram and power to the control rod drives is removed. After a short time period (about 10 sec), the scram signal is removed allowing a scram reset and restoring the normal valve lineup in the control rod drive hydraulic system; also, the main steam line isolation scram and main condenser low vacuum scram are bypassed.

1.0 DEFINITIONS (Cont'd)

Simulated Automatic Actuation - Simulated automatic actuation means applying a simulated signal to the sensor to actuate the circuit in question.

SITE BOUNDARY - That line beyond which the land is not owned, leased or otherwise controlled by licensee.

Source Check - A source check shall be the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.

Startup/Hot Standby Mode - In this mode the reactor protection scram trips, initiated by condenser low vacuum and main steam line isolation valve closure are bypassed, the reactor protection system is energized with IRM neutron monitoring system trip, the APRM 15% high flux trip, and control rod withdrawal interlocks in service. This is often referred to as just Startup Mode. This is intended to imply the Startup/Hot Standby position of the mode switch.

Surveillance Frequency - Periodic surveillance tests, checks calibrations, and examinations shall be performed within the specified surveillance intervals. The operating cycle interval as pertaining to instrument and electrical surveillance shall not exceed 18 months. These specified time intervals may be exceeded by 25%. In cases where the elapsed interval has exceeded 100% of the specified interval, the next surveillance interval shall commence at the end of the original specified interval. Surveillance tests are not required on systems or parts of the systems that are not required to be operable or are tripped. If tests are missed on parts not required to be operable or are tripped, then they shall be performed prior to returning the system to an operable status.

Transition Boiling - Transition boiling means the boiling regime between nucleate and film boiling. Transition boiling is the regime in which both nucleate and film boiling occur intermittently with neither type being completely stable.

Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate

Table 3.1.1 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENTATION REQUIREMENT

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting	Modes in which Function Must be Operable			Number of Instrument Channels Provided by Design	Action (1)
			Refuel (7)	Startup	Run		
2	High Water Level in Scram Discharge Instrument Volume	≤50 Gallons	X(2)	X	X	4 Instrument Channels	A
2	Turbine Condenser Low Vacuum	≥23 in. Hg. Vacuum			X	4 Instrument Channels	A or C
2	Main Steam Line High Radiation	≤3 X Normal Full Power Background	X	X	X(14)	4 Instrument Channels	A
4	Main Steam Line Isolation Valve Closure	≤10% Valve Closure			X(6)	8 Instrument Channels	A
2	Turbine Control Valve Fast Closure	500<P<850 psig Control Oil Pressure Between Fast Closure Solenoid and Disc Dump Valve			X(4)	4 Instrument Channels	A or D
4	Turbine Stop Valve Closure	≤10% Valve Closure			X(4)	8 Instrument Channels	A or D

NOTES FOR TABLE 3.1.1

1. There shall be two operable or tripped trip systems for each function. If the minimum number of operable sensor channels for a trip system cannot be met, the affected trip system shall be placed in the safe (tripped) condition, or the appropriate actions listed below shall be taken.

   A. Initiate insertion of operable rods and complete insertion of all operable rods within four hours.

   B. Reduce power level to IRM range and place mode switch in the start up position within 8 hours.

   C. Reduce turbine load and close main steam line isolation valves within 8 hours.

   D. Reduce power to less than 30% rated.

2. Permissible to bypass, in refuel and shutdown positions of the reactor mode switch.

3. Deleted.

4. Bypassed when turbine first stage pressure is less than 220 psig or less than 30% of rated.

5. IRM's are bypassed when APRM's are onscale and the reactor mode switch is in the run position.

6. The design permits closure of any two lines without a scram being initiated.

7. When the reactor is subcritical and the reactor water temperature is less than 212 degrees F, only the following trip functions need to be operable:

   A. Mode switch in shutdown

   B. Manual scram

   C. High flux IRM

   D. Scram discharge instrument volume high level

8. Not required to be operable when primary containment integrity is not required.

9. Not required to be operable when the reactor pressure vessel head is not bolted to the vessel.

TABLE 4.1.1 (Cont'd)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT FUNCTIONAL TESTS
MINIMUM FUNCTIONAL TEST FREQUENCIES FOR SAFETY INSTRUMENT AND CONTROL CIRCUITS

	Group (2)	Functional Test	Minimum Frequency (3)
High Water Level in Scram Discharge Instrument Volume	A	Trip Channel and Alarm	Every 1 month.
Turbine Condenser Low Vacuum (6)	B2	Trip Channel and Alarm (4)	Every 1 month (1).
Main Steam Line High Radiation	B1	Trip Channel and Alarm (4)	Once/week.
Main Steam Line Isolation Valve Closure	A	Trip Channel and Alarm	Every 1 month (1).
Turbine Control Valve EHC Oil Pressure	A	Trip Channel and Alarm	Every 1 month.
Turbine First Stage Pressure Permissive	A	Trip Channel and Alarm	Every 3 months (1).
Turbine Stop Valve Closure	A	Trip Channel and Alarm	Every 1 month (1).

TABLE 4.1.2 (Cont'd.)

REACTOR PROTECTION SYSTEM (SCRAM) INSTRUMENT CALIBRATION
MINIMUM CALIBRATION FREQUENCIES FOR REACTOR PROTECTION INSTRUMENT CHANNELS

Instrument Channel	Group (1)	Calibration (4)	Minimum Frequency (2)
Turbine Control Valve Fast Closure Oil Pressure Trip	A	Standard Pressure Source	Once per operating cycle.
Turbine Stop Valve Closure	A	Note (5)	Note (5)

3.1 BASES (Cont'd)

the amount of water which must be accommodated during a scram.

During normal operation the discharge volume is empty; however, should it fill with water, the water discharged to the piping from the reactor could not be accommodated which would result in slow scram times or partial control rod insertion. To preclude this occurrence, level switches have been provided in the instrument volume which alarm and scram the reactor when the volume of water reaches 50 gallons. As indicated above, there is sufficient volume in the piping to accommodate the scram without impairment of the scram times or amount of insertion of the control rods. This function shuts the reactor down while sufficient volume remains to accommodate the discharged water and precludes the situation in which a scram would be required but not be able to perform its function adequately.

A source range monitor (SRM) system is also provided to supply additional neutron level information during start-up but has no scram functions (reference paragraph 7.5.4 FSAR). Thus, the IRM and APRM are required in the "Refuel" and "Start/Hot Standby" modes. In the power range the APRM system provides required protection (reference paragraph 7.5.7 FSAR). Thus the IRM System is not required in the "Run" mode. The APRM's cover only the power range. The IRM's and APRM's provide adequate coverage in the start-up and intermediate range.

The high reactor pressure, high drywell pressure, reactor low water level and scram discharge volume high level scrams are required for Startup and Run modes of plant operation. They are, therefore, required to be operational for these modes of reactor operation.

The requirement to have the scram functions indicated in Table 3.1.1 operable in the Refuel mode assures that shifting to the Refuel mode during reactor power operation does not diminish the protection provided by the reactor protection system.

The turbine condenser low vacuum scram is only required during power operation and must be bypassed to start up the unit. The main condenser low vacuum trip is bypassed except in the run position of the mode switch.

Turbine stop valve closure occurs at 10% of valve closure. Below 220 psig turbine first stage pressure (30% of rated), the scram signal due to turbine stop valve closure is bypassed because the flux and pressure scrams are adequate to protect the reactor.

TABLE 3.2.A

INSTRUMENTATION THAT INITIATES PRIMARY CONTAINMENT ISOLATION

Minimum No. of Operable Instrument Channels per Trip System (1)	Instrument	Trip Level Setting	Number of Instrument Channels Provided By Design	Action (2)
2	Main Steam Line Leak Detection High Temperature	≤ 200 Deg. F	4 Inst. Channels	B
1	Reactor Cleanup System High Flow	< 300% of Rated Flow	2 Inst. Channels	C
1	Reactor Cleanup System High Temperature	≤ 200 Deg. F.	1 Inst. Channels	E
2	Reactor Pressure (Feedwater Flush System Interlock)	≤ 600 psig	4 Inst. Channels	F

NOTES FOR TABLE 3.2.A

1. Whenever Primary Containment integrity is required by Section 3.7, there shall be two operable or tripped trip systems for each function.

2. If the first column cannot be met for one of the trip systems, that trip system shall be tripped or the appropriate action listed below shall be taken:

   A. Initiate an orderly shutdown and have the reactor in Cold Shutdown Condition in 24 hours.

   B. Initiate an orderly load reduction and have Main Steam Lines isolated within eight hours.

   C. Isolate Reactor Water Cleanup System.

   D. Isolate Shutdown Cooling.

   E. Isolate Reactor Water Cleanup Filter Demineralizers unless the following provision is satisifed. The RWCU Filter Demineralizer may be used (the isolation overridden) to route the reactor water to the main condenser or waste surge tank, with the high temperature trip inoperable for up to 48 hours, provided the water inlet temperature is monitored once per hour and confirmed to be below 180 degreef F.

   F. Isolate Feedwater Flush System

3. Instrument setpoint corresponds to 538 inches above vessel zero.

4. Instrument setpoint corresponds to 378 inches above vessel zero.

5. Two required for each steam line.

6. These signals also start SBGTS and initiate secondary containment isolation.

7. Only required in Run Mode (interlocked with Mode Switch).

8. At a radiation level of 1.5 times the normal rated power background, an alarm will be tripped in the control room to alert the control room operators to an increase in the main steam line tunnel radiation level.

NOTES FOR TABLE 3.2.A (Continued)

9. In the event of a loss of ventilation in the main steam line tunnel area, the main steam line tunnel exhaust duct high temperature setpoint may be raised up to 250 degrees F for a period not to exceed 30 minutes to permit restoration of the ventilation flow. During the 30 minute period, an operator shall observe control room indications of the duct temperature so in the event of rapid increases (indicative of a steam line break) the operator shall promptly close the main steam line isolation valves.

Amendment No. 29, 115

TABLE 4.2.A

MINIMUM TEST AND CALIBRATION FREQUENCY FOR PCIS

	Instrument Channel (5)	Instrument Functional Test	Calibration Frequency	Instrument Check
1)	Reactor High Pressure (Shutdown Cooling Permissive)	(1)	Once/3 months	None
2)	Reactor Low-Low-Low Water Level (7)	(1)(3)	Once/operating cycle	Once/day
3)	Main Steam High Temp.	(1)(3)	Once/operating cycle	Once/day
4)	Main Steam High Flow (7)	(1)(3)	Once/operating cycle	Once/day
5)	Main Steam Low Pressure	(1)	Once/3 months	None
6)	Reactor Water Cleanup High Flow	(1)	Once/3 months	Once/day
7)	Reactor Water Cleanup High Temp.	(1)	Once/3 months	None
8)	Reactor Pressure (Feedwater Flush Permissive)	(1)(3)	Once/operating cycle	Once/day

	Logic System Functional Test (4) (6)	Frequency
1)	Main Steam Line Isolation Vvs. Main Steam Line Drain Vvs. Reactor Water Sample Vvs.	Once/6 months
2)	RHR - Isolation Vv. Control Shutdown Cooling Vvs. Head Spray	Once/6 months
3)	Reactor Water Cleanup Isolation	Once/6 months
4)	Drywell Isolation Vvs. TIP Withdrawal Atmospheric Control Vvs. Sump Drain Valves	Once/6 months
5)	Standby Gas Treatment System Reactor Building Isolation	Once/6 months

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION SUPPORTING

AMENDMENTS NOS. 117 AND 121 TO FACILITY OPERATING LICENSES 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 letter dated July 17, 1985, Philadelphia Electric Company (the licensee) requested amendments to the Technical Specifications (TSs) (Appendix A of Operating License Nos. DPR-44 and DPR-56) for Peach Bottom Atomic Power Station, Units 2 and 3, to permit bypassing of a scram signal for main steam isolation or main condenser vacuum while not in the "RUN" mode without a reactor pressure restriction.

2.0 EVALUATION

Currently, Table 3.1.1, Table 4.1.1 and the supporting Definitions and Bases paragraphs in the Peach Bottom TSs permit the scram signals associated with main steam isolation and low main condenser vacuum to be bypassed when not in "RUN" concurrent with reactor pressure less than 600 psig. The licensee proposes to eliminate the pressure restriction so that the scram signals from main steam isolation and low condenser vacuum are always bypassed when the mode selector switch is in the "REFUEL," the "START/HOT STANDBY," or the "SHUTDOWN" position. The licensee states that the existing logic with the pressure restriction on the bypass for the two scram signals mentioned above was included in the design not as a limiting safety system setting, but to compensate for operational difficulties observed at BWR plants of an earlier design. The licensee submits the test results documented in General Electric Report No. NEDO-20697, "Bottled-up Operation of a BWR," dated November 1974 to support the conclusion that the pressure restriction on the scram bypass can be deleted. The licensee also notes that the Standard Technical Specifications for General Electric Boiling Water Reactors, NUREG-0123, do not include the scram bypass pressure restriction.

We have reviewed the proposed changes to the Peach Bottom TSs and have compared the changes with the Plant Safety Analysis presented in Chapter 14 of the Peach Bottom Updated FSAR. No instance was identified where credit was taken in any of the plant transient or accident scenarios for a scram initiated by the current bypass logic due to pressure. Also a review of two recently licensed BWRs similar in design to the Peach Bottom units indicate that both plants are permitted by their TSs to bypass the scram signals for main steam isolation and condenser low vacuum when not in "RUN" without any pressure restriction.

A review of the SERs of two other BWRs in advanced states of licensing, which are also similar in design to the Peach Bottom units, determined that neither design included a pressure restriction on the scram signal bypass when not in "RUN." On the basis of our review of the licensee's submittal, including NEDO-20697, as well as the current licensing basis as exhibited in the four cases stated above, we find the licensee's requested changes to be acceptable.

The licensee has also proposed to delete obsolete footnotes. These footnotes are obsolete since they reference modifications and testing which have been completed. We find these deletions to be administrative in nature and, therefore, to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

4.0 CONCLUSION

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

Dated: March 14, 1986

Principal Contributor: James E. Beall, DRP, Region I