



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

July 15, 1980

Dockets Nos. 50-277
and ~~50-278~~

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

Dear Mr. Bauer:

The Commission has issued the enclosed Amendments Nos. 71 and 69 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 in response to your application dated May 20, 1980.

The changes to the Technical Specifications involve: (1) clarification of the definition Operable, (2) addition of general Limiting Conditions for Operation, and (3) addition of action statements for certain specifications.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert W. Reid".

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:

1. Amendment No. 71 to DPR-44
2. Amendment No. 69 to DPR-56
3. Safety Evaluation
4. Notice

cc w/enclosures:
See next page

800 7246238

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Philadelphia Electric Company

cc:

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Government Publications Section
State Library of Pennsylvania
Education Building
Commonwealth and Walnut Streets
Harrisburg, Pennsylvania 17126

cc w/enclosure(s) & incoming dtd.:
5/20/80

Mr. R. A. Heiss, Coordinator
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Governor's Office of State Planning
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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. 71
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 May 20, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-44 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 71, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 15, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 71

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 pages are identified by amendment number and contain vertical lines indicating the area of change.

<u>Remove Pages</u>	<u>Insert Pages</u>
3	3
4	4
34	34
--	34a (added)
--	34b (added)
35	35
145a	145a
146	146
173	173
176	176
237	237*
238	238

*Overleaf; no changes on this page.

1.0 DEFINITIONS (Cont'd)

the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation, the safety limits will never be exceeded.

Logic - A logic is an arrangement of relays, contacts and other components that produces a decision output.

- (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.
- (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.

Logic System Functional Test - A logic system functional test means a test of all relays and contacts of a logic circuit to insure all components are operable per design intent. Where practicable, action will go to completion; i.e., pumps will be started and valves operated.

Maximum Fraction of Limiting Power Density (MFLPD) - The Maximum Fraction of Limiting Power Density (MFLPD) is the highest value existing in the core of the Fraction of Limiting Power Density (FLPD).

Minimum Critical Power Ratio (MCFR) - The minimum in-core critical power ratio corresponding to the most limiting fuel assembly in the core.

Mode of Operation - A reactor mode switch selects the proper interlocks for the operational status of the unit. The following are the modes and interlocks provided: Refuel Mode, Run Mode, Shutdown Mode, Startup/Hot Standby Mode.

OPERABLE - OPERABILITY - A system, subsystem, train, component, or device is OPERABLE or has OPERABILITY when it is capable of performing its specified function and all instrumentation, controls, normal and emergency electrical power sources, cooling or seal water supplies, lubrication systems, and other auxiliary equipment that are required for the system, subsystem, train,

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1.0 DEFINITIONS (Cont'd)

component, or device to perform its function are also capable of performing their related support function.

Operating - Operating means that a system or component is performing its intended functions in its required manner.

Operating Cycle - Interval between the end of one refueling outage for a particular unit and the end of the next subsequent refueling outage for the same unit.

Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All non-automatic containment isolation valves on lines connected to the reactor coolant system or containment which are not required to be open during accident conditions are closed. These valves may be opened to perform necessary operational activities.
2. At least one door in each airlock is closed and sealed.
3. All automatic containment isolation valves are operable or deactivated in the isolated position.
4. All blind flanges and manways are closed.

Protective Action - An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.

Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

Rated Power - Rated power refers to operation at a reactor power of 3,293 MWt; this is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power.

LIMITING CONDITIONS FOR OPERATION

3.0 APPLICABILITY

- A. Limiting Conditions for Operation and action requirements are applicable during the operational conditions and other states specified for each specification.
- B. Adherence to the requirements of the Limiting Condition of Operation and associated action within the specified time interval constitute compliance with the specification if the Limiting Condition for Operation is restored before the specified time interval expires.
- C. If a Limiting Condition for Operation or associated action requirements cannot be satisfied, the unit shall be placed in HOT SHUTDOWN within 6 hours and in COLD SHUTDOWN within 36 hours unless corrective measures are completed to satisfy the Limiting Condition for Operation or action requirement, or until the reactor is placed in an operational condition in which the specification is not applicable. Exceptions to this requirement are stated in the individual specifications.
- D. When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of the Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant systems, subsystems, trains, components and devices are OPERABLE, or satisfy this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in HOT SHUTDOWN within 6 hours, and in COLD SHUTDOWN within 36 hours. This specification is not applicable in Cold Shutdown.

BASES - LIMITING CONDITIONS FOR OPERATION APPLICABILITY

3.0.C This specification delineates the action to be taken for circumstances not directly provided for in the action statements and whose occurrence would violate the intent of the specification. For example, a specification may require two subsystems to be operable and provides explicit action requirements if one subsystem is inoperable. Under the terms of Specification 3.0.C, if both of the required subsystems are inoperable, and an action requirement is not identified in the specifications, then the unit is to be in at least Hot Shutdown within 6 hours and in Cold Shutdown within 36 hours.

3.0.D This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the action statements for power sources, when a normal or emergency power source is not operable. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the action statements associated with individual systems, subsystems, trains, components or devices to be consistent with the action statements of the associated electrical power source. It allows operation to be governed by the time limits of the action statement associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 3.5.F.1 provides for an out-of-service time when one of the four diesel generators is not operable. If the definition of operable were applied without consideration of Specification 3.0.D, all systems, subsystems, trains, components, and devices supplied by the inoperable emergency power source would also be inoperable. This would dictate invoking the applicable action statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.D permit the time limits for continued operation to be consistent with the action statement for the inoperable emergency diesel generator instead, provided the other specified conditions are satisfied.

BASES - LIMITING CONDITIONS FOR OPERATION APPLICABILITY (Cont'd)

In this case, this would mean that the corresponding normal power source must be operable (as must be the components supplied by the normal power source) and all redundant systems, subsystems, trains, components and devices in the other division must be operable, or likewise satisfy Specification 3.0.D (i.e., be capable of performing their design functions and have an emergency power source operable). If these conditions are not satisfied, shutdown is required in accordance with this specification.

In the cold shutdown condition and refuel mode, Specification 3.0.D is not applicable; and thus, the individual action statements for each applicable Limiting Condition for Operation in these conditions must be adhered to.

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.1 REACTOR PROTECTION SYSTEM

4.1 REACTOR PROTECTION SYSTEM

Applicability:

Applies to the instrumentation and associated devices which initiate a reactor scram.

Applicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective

To assure the operability of the reactor protection system.

Objective

To specify the type and frequency of surveillance to be applied to the protection instrumentation.

Specification:

Specification:

- | | |
|---|---|
| <p>A. When there is fuel in the vessel, the setpoint, minimum number of trip systems, and minimum number of instrument channels that must be operable for each position of the reactor mode switch shall be as given in Table 3.1.1.</p> | <p>A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1.1 and 4.1.2 respectively.</p> |
| <p>B. The designed system response times from the opening of the sensor contact up to and including the opening of the trip actuator contacts shall not exceed 100 milliseconds. Otherwise, the affected trip system shall be placed in the tripped condition, or the action listed in Table 3.1.1 for the specific trip function shall be taken.</p> | <p>B. Daily, during reactor power operation, the maximum fraction of limiting power density shall be checked and the SCRAM and APRM Rod Block settings given by equations in Specification 2.1.A.1 and 2.1.B shall be calculated if the maximum fraction of the limiting power density exceeds the fraction of rated power.</p> |

LIMITING CONDITIONS FOR OPERATION3.6.B Coolant Chemistry

2. The following limits shall be observed for reactor water quality prior to any startup and when operating at rated pressure:

- a) Conductivity 5.0 umho/cm at 25 °C
- b) Chloride concentration 0.2 ppm

3. Reactor water quality may exceed the limits of Specification 3.6.B.2 only for the time limits specified below. If these time limits or the maximum quality limits specified are exceeded, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours, unless a safety analysis, approved by FCRS and O&SR Committee, has confirmed that the higher impurity levels will not damage primary system materials.

- a) Conductivity at 25 °C
Time above 5 umho/cm 2 weeks/year
Maximum limit 10 umhos/cm

SURVEILLANCE REQUIREMENTS4.6.B. Coolant Chemistry

2. A sample of reactor coolant shall be analyzed:

- a) At least every 4 days at steaming rates above 100,000 pounds per hour for conductivity and chloride ion content.
- b) At least every day during startups and at steaming rates below 100,000 pounds per hour for conductivity and chloride ion content.
- c) At least every 4 hours during startups and at steaming rates below 100,000 pounds per hour for chloride ion content if the conductivity is above 0.5 umho/cm or if it increases at a rate of 0.2 umho/cm/hr or more.
- d) At least once every week for total iodine concentration when the air ejector offgas monitor indicates that the stack release rate would be in excess of 100,000 uci/sec assuming a 30 min. holdup.

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LIMITING CONDITIONS FOR OPERATION

3.6.B Coolant Chemistry (Cont'd)

b) Chloride Concentration

Time above 2 weeks/year
0.2 ppm

Maximum limit 1.0 ppm

c) pH

During operations, if the conductivity exceeds 1.0 umho/cm, pH shall be measured and brought within the 5.6 to 8.6 range within 24 hours. If the pH cannot be corrected, or if the pH is outside a range of 4 to 10, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours.

C. Coolant Leakage

1. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212 degree F, reactor coolant leakage to the primary containment from unidentified sources shall not exceed 5 gpm. In addition, the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm.
2. Both the sump and air sampling systems shall be operable during reactor power operation. From and after the date that one of these systems is made or found to be inoperable for any reason, reactor power operation is permissible only during the succeeding seven days unless the system is made operable sooner.
3. If the conditions in 1 or 2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in Cold Shutdown Condition within 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.B Coolant Chemistry (Cont'd)

C. Coolant Leakage

1. Reactor coolant system leakage shall be checked by the sump pump and air sampling system and recorded at least once per day.

LIMITING CONDITIONS FOR OPERATION

3.7.A.6.c. (Cont'd)

the unit shall be in Hot Shutdown within 12 hours.

- d. A 30 psig limit is the maximum containment repressurization allowable using the CAD system. Venting via the SBT system to this stack must be initiated at 30 psig following the initial peak pressure at 49.1 psig.

SURVEILLANCE REQUIREMENTS

4.7.A.6.a (Cont'd)

The CAD system H2 and O2 analyzers shall be tested for operability using standard bottled H2 and O2 once per month and shall be calibrated once per 6 months. The atmospheric analyzing system shall be functionally tested once per operating cycle in conjunction with the specification 4.7.A.6.a. Should one of the two H2 or O2 analyzers serving the drywell or suppression pool be found inoperable the remaining analyzer of the same type serving the same compartment shall be tested for operability once per week until the defective analyzer is made operable.

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LIMITING CONDITIONS FOR OPERATION

3.7.C Secondary Containment

1. Secondary containment integrity shall be maintained during all modes of plant operation except when all of the following conditions are met.
 - a) the reactor is subcritical and Specification 3.3.A is met.
 - b) the reactor water temperature is below 212 Degrees F and the reactor coolant system is vented.
 - c) No activity is being performed which can reduce the shutdown margin below that specified in Specification 3.3.A.
 - d) The fuel cask or irradiated fuel is not being moved in the reactor building.

2. If Specification 3.7.C.1 cannot be met, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours, irradiated fuel handling operations in the secondary containment, core alterations, and activities which could reduce the shutdown margin shall be suspended.

SURVEILLANCE REQUIREMENTS

4.7.C Secondary Containment

1. Secondary containment surveillance shall be performed as indicated below:
 - a) A preoperational secondary containment capability test shall be conducted after isolating the reactor building and placing either standby gas treatment system filter train in operation. Such tests shall demonstrate the capability to maintain 1/4 inch of water vacuum under calm wind (<5 mph) conditions with a filter train flow rate of not more than 10,500 cfm.
 - b) Additional tests shall be performed during the first operating cycle under an adequate number of different environmental wind conditions to enable valid extrapolation of the test results.
 - c) Secondary containment capability to maintain 1/4 inch of water vacuum under calm wind (<5 mph) conditions with a filter train flow rate of not more than 10,500 cfm, shall be demonstrated at each refueling outage prior to refueling.
 - d) After a secondary containment violation is determined, the standby gas treatment system will be operated immediately after the affected zones are isolated from the remainder of the secondary containment to confirm its ability to maintain the remainder of the secondary containment at 1/4 inch of water negative pressure under calm wind conditions.

LIMITING CONDITIONS FOR OPERATION3.12 River LevelApplicability:

Applies to the status of the river level.

Specification:A. High River Water Level

1. If river level reaches a level of 113.0 ft. (C.D.) at Peach Bottom and the predicted flow rate is greater than 840,000 cfs, the reactors will be shut down to the cold condition using normal operating procedures.
2. If the river level exceeds 114.0 ft. (C.D.) at Peach Bottom, the reactor will be manually scrambled and placed in the cold condition according to the applicable Special Event Procedure.

B. Low River Water Level

1. In the event of an unscheduled drop in river level to 104.0 ft. (C.D.) at Peach Bottom, the reactors shall be shut down to the cold condition using normal operating procedures.
2. In the event of an unscheduled drop in water level to 98.5 ft. (C.D.) at Peach Bottom, the reactors will be manually scrambled and placed in the cold condition according to the applicable Special Event Procedure.

SURVEILLANCE REQUIREMENTS4.12 River LevelApplicability:

Applies to the surveillance requirements associated with river level.

Specification:A. High River Water LevelB. Low River Water Level

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LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

C. Level Instrumentation

1. Two of the three river water level indicators in the control room shall be continuously operable.
2. Should less than 2 indicators be available, prompt action shall be taken to restore at least 2 indicators to continuous operation. Shutdown of the reactor is not required.

C. Level Instrumentation

1. River water level shall be logged once each shift.
2. Operability shall be checked once each shift by visual observation during level logging



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. 69
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 May 20, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

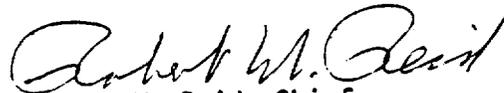
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-56 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 69, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 15, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 69

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 pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove Pages

Insert Pages

3

3

4

4

34

34

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34a (added)

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34b (added)

35

35

145a

145a

146

146

173

173

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237*

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238

*Overleaf; no changes on this page.

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1.0 DEFINITIONS (Cont'd)

the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation, the safety limits will never be exceeded.

Logic - A logic is an arrangement of relays, contacts and other components that produces a decision output.

- (a) Initiating - A logic that receives signals from channels and produces decision outputs to the actuation logic.
- (b) Actuation - A logic that receives signals (either from initiation logic or channels) and produces decision outputs to accomplish a protective action.

Logic System Functional Test - A logic system functional test means a test of all relays and contacts of a logic circuit to insure all components are operable per design intent. Where practicable, action will go to completion; i.e., pumps will be started and valves operated.

Maximum Fraction of Limiting Power Density (MFLPD) - The Maximum Fraction of Limiting Power Density (MFIPD) is the highest value existing in the core of the Fraction of Limiting Power Density (FLPD).

Minimum Critical Power Ratio (MCFR) - The minimum in-core critical power ratio corresponding to the most limiting fuel assembly in the core.

Mode of Operation - A reactor mode switch selects the proper interlocks for the operational status of the unit. The following are the modes and interlocks provided: Refuel Mode, Run Mode, Shutdown Mode, Startup/Hot Standby Mode.

OPERABLE - OPERABILITY - A system, subsystem, train, component, or device is OPERABLE or has OPERABILITY when it is capable of performing its specified function and all instrumentation, controls, normal and emergency electrical power sources, cooling or seal water supplies, lubrication systems, and other auxiliary equipment that are required for the system, subsystem, train,

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1.0 DEFINITIONS (Cont'd)

component, or device to perform its function are also capable of performing their related support function.

Operating - Operating means that a system or component is performing its intended functions in its required manner.

Operating Cycle - Interval between the end of one refueling outage for a particular unit and the end of the next subsequent refueling outage for the same unit.

Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All non-automatic containment isolation valves on lines connected to the reactor coolant system or containment which are not required to be open during accident conditions are closed. These valves may be opened to perform necessary operational activities.
2. At least one door in each airlock is closed and sealed.
3. All automatic containment isolation valves are operable or deactivated in the isolated position.
4. All blind flanges and manways are closed.

Protective Action - An action initiated by the protection system when a limit is reached. A protective action can be at a channel or system level.

Protective Function - A system protective action which results from the protective action of the channels monitoring a particular plant condition.

Rated Power - Rated power refers to operation at a reactor power of 3,293 MWt; this is also termed 100 percent power and is the maximum power level authorized by the operating license. Rated steam flow, rated coolant flow, rated neutron flux, and rated nuclear system pressure refer to the values of these parameters when the reactor is at rated power. Design power, the power to which the safety analysis applies, is 105% of rated power, which corresponds to 3440 MWt.

LIMITING CONDITIONS FOR OPERATION

3.0 APPLICABILITY

- A. Limiting Conditions for Operation and action requirements are applicable during the operational conditions and other states specified for each specification.
- B. Adherence to the requirements of the Limiting Condition of Operation and associated action within the specified time interval constitute compliance with the specification if the Limiting Condition for Operation is restored before the specified time interval expires.
- C. If a Limiting Condition for Operation or associated action requirements cannot be satisfied, the unit shall be placed in HOT SHUTDOWN within 6 hours and in COLD SHUTDOWN within 36 hours unless corrective measures are completed to satisfy the Limiting Condition for Operation or action requirement, or until the reactor is placed in an operational condition in which the specification is not applicable. Exceptions to this requirement are stated in the individual specifications.
- D. When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of the Limiting Condition for Operation, provided: (1) its corresponding normal or emergency power source is OPERABLE; and (2) all of its redundant systems, subsystems, trains, components and devices are OPERABLE, or satisfy this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in HOT SHUTDOWN within 6 hours, and in COLD SHUTDOWN within 36 hours. This specification is not applicable in Cold Shutdown.

BASES - LIMITING CONDITIONS FOR OPERATION APPLICABILITY

- 3.0.C This specification delineates the action to be taken for circumstances not directly provided for in the action statements and whose occurrence would violate the intent of the specification. For example, a specification may require two subsystems to be operable and provides explicit action requirements if one subsystem is inoperable. Under the terms of Specification 3.0.C, if both of the required subsystems are inoperable, and an action requirement is not identified in the specifications, then the unit is to be in at least Hot Shutdown within 6 hours and in Cold Shutdown within 36 hours.
- 3.0.D This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the action statements for power sources, when a normal or emergency power source is not operable. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the action statements associated with individual systems, subsystems, trains, components or devices to be consistent with the action statements of the associated electrical power source. It allows operation to be governed by the time limits of the action statement associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

For example, Specification 3.5.F.1 provides for an cut-of-service time when one of the four diesel generators is not operable. If the definition of operable were applied without consideration of Specification 3.0.D, all systems, subsystems, trains, components, and devices supplied by the inoperable emergency power source would also be inoperable. This would dictate invoking the applicable action statements for each of the applicable Limiting Conditions for Operation. However, the provisions of Specification 3.0.D permit the time limits for continued operation to be consistent with the action statement for the inoperable emergency diesel generator instead, provided the other specified conditions are satisfied.

BASES - LIMITING CONDITIONS FOR OPERATION APPLICABILITY (Cont'd)

In this case, this would mean that the corresponding normal power source must be operable (as must be the components supplied by the normal power source) and all redundant systems, subsystems, trains, components and devices in the other division must be operable; or likewise satisfy Specification 3.0.D (i.e., be capable of performing their design functions and have an emergency power source operable). If these conditions are not satisfied, shutdown is required in accordance with this specification.

In the cold shutdown condition and refuel mode, Specification 3.0.D is not applicable; and thus, the individual action statements for each applicable Limiting Condition for Operation in these conditions must be adhered to.

LIMITING CONDITIONS FOR OPERATION3.1 REACTOR PROTECTION SYSTEMApplicability:

Applies to the instrumentation and associated devices which initiate a reactor scram.

Objective

To assure the operability of the reactor protection system.

Specification:

- A. When there is fuel in the vessel, the setpoint, minimum number of trip systems, and minimum number of instrument channels that must be operable for each position of the reactor mode switch shall be as given in Table 3.1.1.
- B. The designed system response times from the opening of the sensor contact up to and including the opening of the trip actuator contacts shall not exceed 100 milliseconds. Otherwise, the affected trip system shall be placed in the tripped condition, or the action listed in Table 3.1.1 for the specific trip function shall be taken.

SURVEILLANCE REQUIREMENTS4.1 REACTOR PROTECTION SYSTEMApplicability:

Applies to the surveillance of the instrumentation and associated devices which initiate reactor scram.

Objective

To specify the type and frequency of surveillance to be applied to the protection instrumentation.

Specification:

- A. Instrumentation systems shall be functionally tested and calibrated as indicated in Tables 4.1.1 and 4.1.2 respectively.
- B. Daily, during reactor power operation, the maximum fraction of limiting density factor shall be checked and the SCRAM and APRM Rod Block settings given by equations in Specification 2.1.A.1 and 2.1.B shall be calculated if the maximum fraction of the limiting power density exceeds the fraction of rated power.

PEAPS

LIMITING CONDITIONS FOR OPERATION

3.6.B Coolant Chemistry

2. The following limits shall be observed for reactor water quality prior to any startup and when operating at rated pressure:

- a) Conductivity 5.0 umho/cm at 25 °C
- b) Chloride concentration 0.2 ppm

3. Reactor water quality may exceed the limits of Specification 3.6.B.2 only for the time limits specified below. If these time limits or the maximum quality limits specified are exceeded, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours, unless a safety analysis, approved by FCRC and O&SR Committee, has confirmed that the higher impurity levels will not damage primary system materials.

- a) Conductivity at 25 °C
Time above 5 umho/cm 2 weeks/year
Maximum limit 10 umhos/cm

SURVEILLANCE REQUIREMENTS

4.6.B. Coolant Chemistry

2. A sample of reactor coolant shall be analyzed:

- a) At least every 4 days at steaming rates above 100,000 pounds per hour for conductivity and chloride ion content.
- b) At least every day during startups and at steaming rates below 100,000 pounds per hour for conductivity and chloride ion content.
- c) At least every 4 hours during startups and at steaming rates below 100,000 pounds per hour for chloride ion content if the conductivity is above 0.5 umho/cm or if it increases at a rate of 0.2 umho/cm/hr or more.
- d) At least once every week for total iodine concentration when the air ejector offgas monitor indicates that the stack release rate would be in excess of 100,000 uci/sec assuming a 30 min. holdup.

PEAFS

LIMITING CONDITIONS FOR OPERATION

3.6.B Coolant Chemistry (Cont'd)

b) Chloride Concentration

Time above 2 weeks/year
0.2 ppm

Maximum limit 1.0 ppm

c) pH

During operations, if the conductivity exceeds 1.0 umho/cm, pH shall be measured and brought within the 5.6 to 8.6 range within 24 hours. If the pH cannot be corrected, or if the pH is outside a range of 4 to 10, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours.

C. Coolant Leakage

1. Any time irradiated fuel is in the reactor vessel and reactor coolant temperature is above 212 degree F, reactor coolant leakage to the primary containment from unidentified sources shall not exceed 5 gpm. In addition, the total reactor coolant system leakage into the primary containment shall not exceed 25 gpm.
2. Both the sump and air sampling systems shall be operable during reactor power operation. From and after the date that one of these systems is made or found to be inoperable for any reason, reactor power operation is permissible only during the succeeding seven days unless the system is made operable sooner.
3. If the conditions in 1 or 2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in Cold Shutdown Condition within 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.B Coolant Chemistry (Cont'd)

C. Coolant Leakage

1. Reactor coolant system leakage shall be checked by the sump pump and air sampling system and recorded at least once per day.

PEAFS

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.7.A.6.c. (Cont'd)

the unit shall be in Hot Shutdown within 12 hours.

- d. A 30 psig limit is the maximum containment repressurization allowable using the CAD system. Venting via the SBT system to this stack must be initiated at 30 psig following the initial peak pressure at 49.1 psig.

4.7.A.6.a (Cont'd)

The CAD system H2 and O2 analyzers shall be tested for operability using standard bottled H2 and O2 once per month and shall be calibrated once per 6 months. The atmospheric analyzing system shall be functionally tested once per operating cycle in conjunction with the specification 4.7.A.6.a. Should one of the two H2 or O2 analyzers serving the drywell or suppression pool be found inoperable the remaining analyzer of the same type serving the same compartment shall be tested for operability once per week until the defective analyzer is made operable.

PEAFS

LIMITING CONDITIONS FOR OPERATION

3.7.C Secondary Containment

1. Secondary containment integrity shall be maintained during all modes of plant operation except when all of the following conditions are met.
 - a) the reactor is subcritical and Specification 3.3.A is met.
 - b) the reactor water temperature is below 212 Degrees F and the reactor coolant system is vented.
 - c) No activity is being performed which can reduce the shutdown margin below that specified in Specification 3.3.A.
 - d) The fuel cask or irradiated fuel is not being moved in the reactor building.

2. If Specification 3.7.C.1 cannot be met, the unit shall be placed in Hot Shutdown within 12 hours and in Cold Shutdown within 36 hours, irradiated fuel handling operations in the secondary containment, core alterations, and activities which could reduce the shutdown margin shall be suspended.

SURVEILLANCE REQUIREMENTS

4.7.C Secondary Containment

1. Secondary containment surveillance shall be performed as indicated below:
 - a) A preoperational secondary containment capability test shall be conducted after isolating the reactor building and placing either standby gas treatment system filter train in operation. Such tests shall demonstrate the capability to maintain 1/4 inch of water vacuum under calm wind (<5 mph) conditions with a filter train flow rate of not more than 10,500 cfm.
 - b) Additional tests shall be performed during the first operating cycle under an adequate number of different environmental wind conditions to enable valid extrapolation of the test results.
 - c) Secondary containment capability to maintain 1/4 inch of water vacuum under calm wind (<5 mph) conditions with a filter train flow rate of not more than 10,500 cfm, shall be demonstrated at each refueling outage prior to refueling.
 - d) After a secondary containment violation is determined, the standby gas treatment system will be operated immediately after the affected zones are isolated from the remainder of the secondary containment to confirm its ability to maintain the remainder of the secondary containment at 1/4 inch of water negative pressure under calm wind conditions.

LIMITING CONDITIONS FOR OPERATION3.12 River LevelApplicability:

Applies to the status of the river level.

Specification:A. High River Water Level

1. If river level reaches a level of 113.0 ft. (C.D.) at Peach Bottom and the predicted flow rate is greater than 840,000 cfs, the reactors will be shut down to the cold condition using normal operating procedures.
2. If the river level exceeds 114.0 ft. (C.D.) at Peach Bottom, the reactor will be manually scrammed and placed in the cold condition according to the applicable Special Event Procedure.

B. Low River Water Level

1. In the event of an unscheduled drop in river level to 104.0 ft. (C.D.) at Peach Bottom, the reactors shall be shut down to the cold condition using normal operating procedures.
2. In the event of an unscheduled drop in water level to 98.5 ft. (C.D.) at Peach Bottom, the reactors will be manually scrammed and placed in the cold condition according to the applicable Special Event Procedure.

SURVEILLANCE REQUIREMENTS4.12 River LevelApplicability:

Applies to the surveillance requirements associated with river level.

Specification:A. High River Water LevelB. Low River Water Level

PEAPS

LIMITING CONDITIONS FOR OPERATION

C. Level Instrumentation

1. Two of the three river water level indicators in the control room shall be continuously operable.
2. Should less than 2 indicators be available, prompt action shall be taken to restore at least 2 indicators to continuous operation. Shutdown of the reactor is not required.

SURVEILLANCE REQUIREMENTS

C. Level Instrumentation

1. River water level shall be logged once each shift.
2. Operability shall be checked once each shift by visual observation during level logging



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENTS NOS. 71 AND 69 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

I. Introduction

By letter dated May 20, 1980, Philadelphia Electric Company (licensee) requested amendments to Facility Operating Licenses Nos. DPR-44 and 56 for the Peach Bottom Atomic Power Station, Units Nos. 2 and 3. The proposed amendments involve: (1) clarification of the definition Operable, (2) addition of general Limiting Conditions for Operation (LCOs) and (3) addition of action statements for certain specifications. The licensee's application is in response to the NRC staff's request dated April 10, 1980.

II. Evaluation

1. Definition - Operable

The NRC staff requested the licensee to revise the definition of Operable to implicitly state that a system is capable of performing its specified function when all necessary instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system to perform its function are also capable of performing their related support function.

We have reviewed the licensee's submittal and determined that this requested change is consistent with our request and is therefore acceptable.

2. General LCOs

LCOs are specified for each safety related system in the plant, and with few exceptions, the ACTION statements address single outages of components, trains or sub-systems. For any particular system, the LCO does not address multiple outages of redundant components, nor does it address the effects of outages of any support system - such as electrical power or cooling water. This is because of the large number of combinations of these types of outages that are possible. Therefore, the NRC staff's April 10, 1980 letter requested the licensee to incorporate general LCOs to assure that no set of equipment outages would be allowed to persist that would

result in the facility being in an unprotected condition. One of the general LCOs specifies the action to be taken for circumstances in excess of those addressed in a specific system specification. The second general LCO addresses the situation for which a system would be declared inoperable solely because its normal or emergency power source is inoperable. Sample specifications were provided in the NRC staff's request. We have reviewed the licensee's proposed addition of general LCOs and determined that they are consistent with the guidance furnished. Therefore, this change is acceptable.

3. Additional Action Statements

The licensee's request also included the addition of action statements for those currently approved specifications that do not specifically address outages of components or systems. The licensee's request was based on the Standard Technical Specifications for General Electric Boiling Water Reactors, NUREG-0123, Rev. 1. The action statements involve the (a) reactor protection system (RPS) response time, (b) reactor coolant chemistry, (c) secondary containment integrity and (d) instrumentation for monitoring river water level.

We have reviewed the licensee's request and determined that the proposed additions for items (b) and (c) above are totally consistent with our standard specifications and are acceptable.

For item (a) the licensee proposed an action statement that would permit continued operability for RPS response times in excess of 100 msec provided that a safety evaluation approved by both the on-site and off-site review committee, indicated that safety limits (specified elsewhere in the Technical Specifications) would not be exceeded. During our review we discussed this aspect with the licensee and indicated that operation with response times in excess of 100 msec would require preapproval by the NRC staff. He agreed to a modified action statement. Therefore, we have determined that this change as modified by the NRC staff is consistent with our requirements and is acceptable.

For item (d) we have reviewed the licensee's submittal and determined that the requested change is unique to the Peach Bottom Technical Specifications. Current requirements for LCOs and surveillance associated with intake structures specify minimum river levels (as a source for service water systems) and maximum levels (for flood protection). Surveillance requirements do not require active monitors of river level. We have determined that our present requirements are included in the Peach Bottom specifications which are unaffected by the proposed change. Therefore, the proposed action statement for inoperable instrumentation is acceptable.

The only other change authorized by the amendments supported by this evaluation is a deletion of obsolete notes regarding inerting makeup system requirements prior to the first Peach Bottom refueling outage. This deletion is pro forma in nature and is acceptable.

III. Environmental Considerations

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have

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

IV. Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 15, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSION

7590-01

DOCKETS NOS. 50-277 AND 50-278

PHILADELPHIA ELECTRIC COMPANY, ET AL,

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendments Nos. 71 and 69 to Facility Operating Licenses Nos. DPR-44 and DPR-56, issued to Philadelphia Electric Company, Public Service Electric and Gas Company, Delmarva Power and Light Company, and Atlantic City Electric Company, which revised Technical Specifications for operation of the Peach Bottom Atomic Power Station, Units Nos. 2 and 3 (the facility) located in York County, Pennsylvania. The amendments are effective as of the date of issuance.

The amendments revise the Technical Specifications and involve: (1) clarification of the definition Operable, (2) addition of general Limiting Conditions for Operation, and (3) addition of action statements for certain specifications.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

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

For further details with respect to this action, see (1) the application for amendments dated May 20, 1980, (2) Amendments Nos. 71 and 69 to Licenses Nos. DPR-44 and DPR-56, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, DC and at the Government Publications Section, State Library of Pennsylvania, Education Building, Commonwealth and Walnut Streets, Harrisburg, Pennsylvania. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 15th day of July 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing