

Mr. George A. Hunger,
 Director-Licensing, M-2A-1
 PECO Energy Company
 Nuclear Group Headquarters
 Correspondence Control Desk
 P.O. Box No. 195
 Wayne, PA 19087-0195

August 16, 1995

SUBJECT: EXTENDED EMERGENCY DIESEL GENERATOR TECHNICAL SPECIFICATION ALLOWED
 OUT-OF-SERVICE TIME, PEACH BOTTOM ATOMIC POWER STATION, UNIT NOS. 2
 AND 3 (TAC NOS. M89243 AND M89244)

Dear Mr. Hunger:

The Commission has issued the enclosed Amendments Nos. 209 and 213 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 in response to your application dated April 7, 1994 as supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995.

These amendments provide for an increased Technical Specification (TS) allowed out-of-service time (AOT) for the Peach Bottom emergency diesel generators (EDG) based on the availability of a power tie-line from the Conowingo Hydroelectric Station.

You are requested to inform the staff, in writing, when this amendment has been implemented. This request 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. Also enclosed is the Notice of Issuance which has been forwarded to the Office of the Federal Register for publication.

Sincerely,
 original signed by
 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. 209 to DPR-44
 2. Amendment No. 213 to DPR-56
 3. Safety Evaluation
 4. Notice

cc w/encls: See next page

WBC FILE CENTER COPY

DISTRIBUTION:

Docket File	MO'Brien(2)	JCalvo	GHill(4)
PUBLIC	JShea	JStolz	APal
PDI-2 Reading	OGC	ACRS(4)	
SVarga	CGrimes	CAnderson, RI	

OFFICE	PDI-2/PM	EELB/C	OGC	PDI-2/PD
NAME	MO'Brien	JCalvo	JStolz	JStolz
DATE	7/27/95	7/27/95	8/14/95	8/4/95

OFFICIAL RECORD COPY

FILENAME: G:\SHEA\PEACH\PB89243.AMD

9508310329 950816
 PDR ADOCK 05000277
 P PDR

CP-1
 DFOI



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 16, 1995

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

SUBJECT: EXTENDED EMERGENCY DIESEL GENERATOR TECHNICAL SPECIFICATION ALLOWED
OUT-OF-SERVICE TIME, PEACH BOTTOM ATOMIC POWER STATION, UNIT NOS. 2
AND 3 (TAC NOS. M89243 AND M89244)

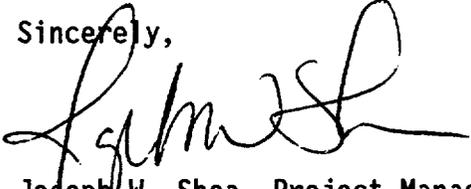
Dear Mr. Hunger:

The Commission has issued the enclosed Amendments Nos. 209 and 213 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 in response to your application dated April 7, 1994 as supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995.

These amendments provide for an increased Technical Specification (TS) allowed out-of-service time (AOT) for the Peach Bottom emergency diesel generators (EDG) based on the availability of a power tie-line from the Conowingo Hydroelectric Station.

You are requested to inform the staff, in writing, when this amendment has been implemented. This request 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. Also enclosed is the Notice of Issuance which has been forwarded to the Office of the Federal Register for publication.

Sincerely,


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. 209 to DPR-44
2. Amendment No. 213 to DPR-56
3. Safety Evaluation
4. Notice

cc w/encls: See next page

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

Peach Bottom Atomic Power Station,
Units 2 and 3

cc:

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

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

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

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

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

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

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

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

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

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

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



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. 209
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 April 7, 1994 as supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 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:

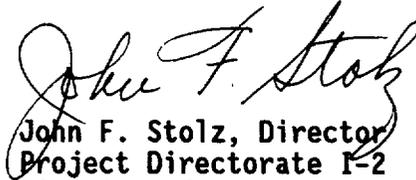
9508310335 950816
PDR ADOCK 05000277
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 209, 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



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: August 16, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 209

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.

<u>Remove</u>	<u>Insert</u>
218	218
220	220
220b	220b
224	224
-	224a

PBAPS

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

4.9.A.1 (Continued)

2. Each of the required diesel generators shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in 4.9.A.1.2.1 by:

1. Verifying the fuel level in the fuel storage tank, and the volume of fuel onsite.
2. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day fuel tank.
3. Verifying that the diesel can start^a and gradually accelerate to synchronous speed with generator voltage and frequency at 4160 ± 410 volts and 60 ± 1.2 HZ.
4. Verifying that the diesel can be synchronized, gradually loaded^a to an indicated 2400-2600^b kw and can operate with this load for at least 60 minutes.
5. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

^aThis test shall be conducted in accordance with the manufacturer's recommendations regarding engine pre-lube and warmup and, as applicable, loading and shutdown.

^bThis load band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing, under direct monitoring by the manufacturer or system engineer, or momentary variations due to changing bus loads shall not invalidate the test.

PBAPS

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.9.B (Continued)

3.a. With one diesel generator inoperable:

1. Verify correct breaker alignment, required equipment available, and indicated power available for the Conowingo Line immediately and once per 12 hours thereafter;

AND

2. Restore the diesel generator to operable status within 14 days from the time that the diesel generator became inoperable.

3.b. If the requirements of 3.9.B.3.a.1, above, cannot be met, either:

1. Restore the diesel generator within the next 7 days (not to exceed 14 days from the time that the diesel generator became inoperable);

OR

2. Satisfy the requirements of 3.9.B.3.a.1, above, within the next 7 days and restore the diesel generator within 14 days from the time that the diesel generator became inoperable.

3.c. If the requirements of 3.9.B.3.a.2 or 3.9.B.3.b cannot be met, then be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

3. When it is determined that one diesel generator is inoperable, verify the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.9.A.1.1.a within 1 hour and once per 8 hours thereafter. Verify within 2 hours that required systems, subsystems, trains, components, and devices that depend on the remaining diesel generators as a source of emergency power are OPERABLE.

If the diesel generator became inoperable for any reason other than preplanned preventative maintenance, or testing, either determine within 24 hours that remaining operable diesel generators are not inoperable due to common cause failure or demonstrate the OPERABILITY of the remaining operable diesel generators by performing Surveillance Requirement 4.9.A.1.2.a.3 for one diesel at a time, within 24 hours* and at least once per 72 hours thereafter.

*This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generators and for which appropriate alternative testing cannot be designed.

PBAPS

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.9.B (Continued)

- | | |
|--|----------------|
| <p>6. With fuel oil in one of the diesel generator main storage tanks not available or not in conformance with Surveillance Requirement 4.9.A.1.2.e, implement the following:</p> <p>a. Isolate the main storage tank from the system, with the associated diesel generator being supplied from one of the remaining storage tanks within 8 hours, and</p> <p>b. Establish and maintain a minimum of 108,000 gallons of diesel fuel oil in the other three main storage tanks within 72 hours, and</p> <p>c. Sample the fuel oil in the other three main storage tanks and confirm conformance with specification 4.9.A.1.2.e within 24 hours, and</p> <p>d. Replace the unacceptable fuel oil with acceptable fuel and return the storage tank to service within 7 days, or place the reactor in Cold Shutdown within 24 hours.</p> | <p>6. None</p> |
|--|----------------|

Accelerated testing of the diesel generators is not required.

- | | |
|---|----------------|
| <p>7. With one of the 4kV emergency busses or 480V emergency load centers required by 3.9.A.3 not energized, declare the associated equipment inoperable and take the appropriate action for that system.</p> | <p>7. None</p> |
|---|----------------|

Reenergize the bus within 24 hours or be in COLD SHUTDOWN within the following 24 hours.

- | | |
|--|--|
| <p>8. With the Conowingo line not available for 15 days, notify the NRC.</p> | <p>8. Verify once/month correct breaker alignment, required equipment available, and indicated power available for the Conowingo Line.</p> |
|--|--|

PBAPS

4.9 BASES (Cont'd)

The diesel generator voltage may decrease to 59% of nominal when the 2000 HP RHR pump motor is started. The load rejection test of the largest single load will be conducted with the EDG governor in isochronous mode using the Residual Heat Removal Pump in full flow test as the rejected load. The load rejection test of 2400-2600 kW may be conducted with the EDG governor and voltage regulator in droop mode parallel to the offsite grid. The EDG voltage will be matched to the bus voltage (4160 ± 410 volts) and the overshoot upon load removal will be limited to 660 volts which is 15% of this nominal value.

The term permanent and auto-connected loads means those loads which the diesel would normally be expected to supply in the scenario being tested. Verification of load shedding from the emergency busses will include only those normally powered from the emergency bus during plant operations. The loads described by the term emergency loads are a Residual Heat Removal Pump, a High Pressure Service Water Pump and the 480 Volt emergency bus load center.

Verification of the Conowingo Line may include a combination of:

- 1) circuit breaker line-up on the Conowingo side (Susquehanna Substation) is verified by Unit 1, PBAPS being powered from Conowingo Line
- 2) circuit breaker verification of PBAPS Unit 2 and 3 switchgear
- 3) communications with the Conowingo Control Room to ensure that required equipment at Conowingo is available.

The extended diesel generator outage afforded by an available Conowingo Tie Line is intended to allow completion of the diesel generator overhaul; however, subject to the diesel generator reliability program, INPO performance criteria, and good operating practices, extended diesel generator outages are permitted for other reasons. Activities or conditions that increase the probability of a Loss of Off-Site power (i.e., switch yard maintenance or severe weather) should be considered when scheduling a diesel generator outage. In addition, the effect of other plant equipment being out of service should be considered when scheduling a diesel generator outage.

The diesel fuel oil quality must be checked to ensure proper operation of the diesel generators. Water content should be minimized because water in the fuel could contribute to excessive damage to the diesel engine. Amendment No. 131 centralized commitments related to Position C.2 of Regulatory Guide 1.137, Revision 1 (October, 1979) "Fuel Oil Systems for Standby Diesel Generators."

Although station batteries will deteriorate with time, utility experience indicates there is almost no possibility of precipitous failure. The type of surveillance described in this specification is that which has been demonstrated over the years to provide an indication of a cell becoming irregular or unserviceable long before it becomes a failure. In addition, the checks described also provide adequate indication that the batteries have the specified ampere hour capability.

The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outages. This testing frequency complies with the testing requirements of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450 (1975), "Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries," and Regulatory Guide 1.129, Revision 1 (February 1978), "Maintenance, Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants."

4.9 BASES (Cont'd)

A performance test determines the ability of the battery to meet a specified discharge rate and duration based on the manufacturer's rating. A service test proves the capability of the battery to deliver the design requirements of the dc systems; i.e., supply and maintain in operable status all of the actual emergency loads for the design basis accident. A performance test is the most severe test because the cycling on the battery at manufacturer's rating shortens the service life of the battery. A service test is performed at design load instead of manufacturer's ratings.

The test interval for the Emergency Service Water system, and pump room fans associated with the ESW pumps is deemed adequate to provide assurance that the equipment will be operable based on good engineering judgment and system redundancy, plus the additional testing accomplished when the diesel generators are tested. Pump flow tests during normal operation will be performed by measuring the head and flow in the system using suitable flow equipment and pressure instrumentation.



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. 213
License No. DPR-56

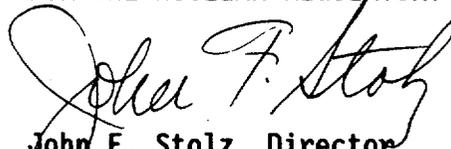
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by PECO Energy Company, et al. (the licensee) dated April 7, 1994 as supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995, complies with the standards and requirements 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. 213, 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



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: August 16, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 213

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.

<u>Remove</u>	<u>Insert</u>
218	218
220	220
220b	220b
224	224
-	224a

PBAPS

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

4.9.A.1 (Continued)

2. Each of the required diesel generators shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in 4.9.A.1.2.1 by:

1. Verifying the fuel level in the fuel storage tank, and the volume of fuel onsite.
2. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day fuel tank.
3. Verifying that the diesel can start^a and gradually accelerate to synchronous speed with generator voltage and frequency at 4160 ± 410 volts and 60 ± 1.2 HZ.
4. Verifying that the diesel can be synchronized, gradually loaded^b to an indicated 2400-2600^b kw and can operate with this load for at least 60 minutes.
5. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

^aThis test shall be conducted in accordance with the manufacturer's recommendations regarding engine pre-lube and warmup and, as applicable, loading and shutdown.

^bThis load band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band for special testing, under direct monitoring by the manufacturer or system engineer, or momentary variations due to changing bus loads shall not invalidate the test.

PBAPS

LIMITING CONDITIONS FOR OPERATIONSURVEILLANCE REQUIREMENTS

3.9.B (Continued)

3.a. With one diesel generator inoperable:

1. Verify correct breaker alignment, required equipment available, and indicated power available for the Conowingo Line immediately and once per 12 hours thereafter;

AND

2. Restore the diesel generator to operable status within 14 days from the time that the diesel generator became inoperable.

3.b. If the requirements of 3.9.B.3.a.1, above, cannot be met, either:

1. Restore the diesel generator within the next 7 days (not to exceed 14 days from the time that the diesel generator became inoperable);

OR

2. Satisfy the requirements of 3.9.B.3.a.1, above, within the next 7 days and restore the diesel generator within 14 days from the time that the diesel generator became inoperable.

3.c. If the requirements of 3.9.B.3.a.2 or 3.9.B.3.b cannot be met, then be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

3. When it is determined that one diesel generator is inoperable, verify the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.9.A.1.1.a within 1 hour and once per 8 hours thereafter. Verify within 2 hours that required systems, subsystems, trains, components, and devices that depend on the remaining diesel generators as a source of emergency power are OPERABLE.

If the diesel generator became inoperable for any reason other than preplanned preventative maintenance, or testing, either determine within 24 hours that remaining operable diesel generators are not inoperable due to common cause failure or demonstrate the OPERABILITY of the remaining operable diesel generators by performing Surveillance Requirement 4.9.A.1.2.a.3 for one diesel at a time, within 24 hours* and at least once per 72 hours thereafter.

*This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY for failures that are potentially generic to the remaining diesel generators and for which appropriate alternative testing cannot be designed.

PBAPS

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

3.9.B (Continued)

- | | | | |
|----|---|----|------|
| 6. | With fuel oil in one of the diesel generator main storage tanks not available or not in conformance with Surveillance Requirement 4.9.A.1.2.e, implement the following: | 6. | None |
| a. | Isolate the main storage tank from the system, with the associated diesel generator being supplied from one of the remaining storage tanks within 8 hours, and | | |
| b. | Establish and maintain a minimum of 108,000 gallons of diesel fuel oil in the other three main storage tanks within 72 hours, and | | |
| c. | Sample the fuel oil in the other three main storage tanks and confirm conformance with specification 4.9.A.1.2.e within 24 hours, and | | |
| d. | Replace the unacceptable fuel oil with acceptable fuel and return the storage tank to service within 7 days, or place the reactor in Cold Shutdown within 24 hours. | | |

Accelerated testing of the diesel generators is not required.

- | | | | |
|----|---|----|------|
| 7. | With one of the 4kV emergency busses or 480V emergency load centers required by 3.9.A.3 not energized, declare the associated equipment inoperable and take the appropriate action for that system. | 7. | None |
|----|---|----|------|

Reenergize the bus within 24 hours or be in COLD SHUTDOWN within the following 24 hours.

- | | | | |
|----|--|----|--|
| 8. | With the Conowingo line not available for 15 days, notify the NRC. | 8. | Verify once/month correct breaker alignment, required equipment available, and indicated power available for the Conowingo Line. |
|----|--|----|--|

PBAPS

4.9 BASES (Cont'd)

The diesel generator voltage may decrease to 59% of nominal when the 2000 HP RHR pump motor is started. The load rejection test of the largest single load will be conducted with the EDG governor in isochronous mode using the Residual Heat Removal Pump in full flow test as the rejected load. The load rejection test of 2400-2600 kW may be conducted with the EDG governor and voltage regulator in droop mode parallel to the offsite grid. The EDG voltage will be matched to the bus voltage (4160 ± 410 volts) and the overshoot upon load removal will be limited to 660 volts which is 15% of this nominal value.

The term permanent and auto-connected loads means those loads which the diesel would normally be expected to supply in the scenario being tested. Verification of load shedding from the emergency busses will include only those normally powered from the emergency bus during plant operations. The loads described by the term emergency loads are a Residual Heat Removal Pump, a High Pressure Service Water Pump and the 480 Volt emergency bus load center.

Verification of the Conowingo Line may include a combination of:

- 1) circuit breaker line-up on the Conowingo side (Susquehanna Substation) is verified by Unit 1, PBAPS being powered from Conowingo Line
- 2) circuit breaker verification of PBAPS Unit 2 and 3 switchgear
- 3) communications with the Conowingo Control Room to ensure that required equipment at Conowingo is operable.

The extended diesel generator outage afforded by an available Conowingo Tie Line is intended to allow completion of the diesel generator overhaul; however, subject to the diesel generator reliability program, INPO performance criteria, and good operating practices, extended diesel generator outages are permitted for other reasons. Activities or conditions that increase the probability of a Loss of Off-Site power (i.e., switch yard maintenance or severe weather) should be considered when scheduling a diesel generator outage. In addition, the effect of other plant equipment being out of service should be considered when scheduling a diesel generator outage.

The diesel fuel oil quality must be checked to ensure proper operation of the diesel generators. Water content should be minimized because water in the fuel could contribute to excessive damage to the diesel engine. Amendment No. 134 centralized commitments related to Position C.2 of Regulatory Guide 1.137, Revision 1 (October, 1979) "Fuel Oil Systems for Standby Diesel Generators."

Although station batteries will deteriorate with time, utility experience indicates there is almost no possibility of precipitous failure. The type of surveillance described in this specification is that which has been demonstrated over the years to provide an indication of a cell becoming irregular or unserviceable long before it becomes a failure. In addition, the checks described also provide adequate indication that the batteries have the specified ampere hour capability.

The station batteries shall be subjected to a performance test every third refueling outage and a service test during the other refueling outages. This testing frequency complies with the testing requirements of the Institute of Electrical and Electronics Engineers (IEEE) Standard 450 (1975), "Recommended Practice for Maintenance, Testing and Replacement of Large Lead Storage Batteries," and Regulatory Guide 1.129, Revision 1 (February 1978), "Maintenance, Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants."

4.9 BASES (Cont'd)

A performance test determines the ability of the battery to meet a specified discharge rate and duration based on the manufacturer's rating. A service test proves the capability of the battery to deliver the design requirements of the dc systems; i.e., supply and maintain in operable status all of the actual emergency loads for the design basis accident. A performance test is the most severe test because the cycling on the battery at manufacturer's rating shortens the service life of the battery. A service test is performed at design load instead of manufacturer's ratings.

The test interval for the Emergency Service Water system, and pump room fans associated with the ESW pumps is deemed adequate to provide assurance that the equipment will be operable based on good engineering judgment and system redundancy, plus the additional testing accomplished when the diesel generators are tested. Pump flow tests during normal operation will be performed by measuring the head and flow in the system using suitable flow equipment and pressure instrumentation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 209 AND 213 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 April 7, 1994, as supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995, the PECO Energy Company (the licensee) submitted a request for changes to the Peach Bottom Atomic Power Station, Unit Nos. 2 and 3, Technical Specifications (TS). The requested changes would provide for an increased TS allowed out-of-service time (AOT) for the Peach Bottom emergency diesel generators (EDG) based on the availability of a power tie-line from the Conowingo Hydroelectric Station.

2.0 EVALUATION

At a meeting on May 15, 1992, the licensee proposed installation of a tie line from the Conowingo Hydroelectric Station as an alternate AC power source in order to satisfy the requirements of 10 CFR 50.63, "Loss of All Alternating Current Power." The staff approved this modification as an acceptable resolution to the requirements of 10 CFR 50.63 in a supplemental safety evaluation dated October 23, 1992. The licensee informed the NRC of completion of this modification by letter dated November 4, 1994.

By letter dated April 7, 1994, the licensee proposed to extend the TS AOT for a single inoperable EDG from the current 7-day allowance to a 30-day allowance. The licensee proposed that use of a 30-day AOT be contingent upon the availability of the Conowingo tie line. The licensee also proposed imposition of reporting requirements for an inoperable tie line, surveillance requirements for the AAC line, a change to the TS bases, as well as an administrative change regarding the internal referencing of the diesel generator TS.

The staff provided a request for additional information to the licensee on July 7, 1994. The licensee responded in a letter dated September 6, 1995. On April 7, 1995, the staff informed the licensee that it could not accept a

9508310337 950816
PDR ADOCK 05000277
PDR

30-day AOT. The staff stated:

The staff finds that it is not prudent to approve a 30-day EDG AOT extension based on a small (5.5 percent) reduction in CDF only, since uncertainties and limitations exist in probabilistic approaches. The staff believes that although PRA is a valuable analytical tool, it needs to be used in conjunction with other technical considerations, such as operating experience and engineering judgment. In addition, the proposed AAC source is not safety grade and has to be aligned manually to the safety buses and therefore is not a one-for-one substitution for an EDG. Furthermore, standard TS allow plant operation with one inoperable EDG for only 3 days. The TS for PBAPS allow plant operation with one inoperable EDG for 7 days. The staff recognizes that the licensee for PBAPS needs AOT relief to properly maintain the EDGs, but not beyond what is reasonable and adequate. The staff believes that a 30-day AOT extension is too long a period of time for an EDG to be out-of-service and, as a result, it might not get the attention that is required to maintain its reliability and availability to respond to emergencies.

The staff believes that 14 days is a sufficient time to perform most maintenance activities. This length of time is based on industry experience; for example, a maximum of 216 hours (13.5 days considering two shifts working 8 hours a shift) is needed for a major overhaul. Therefore, the staff has determined that 14 days should be considered as the maximum AOT on a permanent basis. (An extension beyond 14 days should be considered only on a one-time basis.)

On the basis of the above determination, the staff finds that the licensee's proposal to change the EDG AOT from 7 to 30 days is unacceptable.

However, the staff did state that a 14-day AOT would be acceptable provided the licensee made certain additional commitments. Those requested commitments are detailed in the April 7, 1995 letter.

By letter dated June 16, 1995 and July 13, 1995, the licensee responded to the staff's April 7, 1995 position. The licensee's final proposed changes are described below:

2.1 Proposed Change to TS Section 3.9.B for PBAPS Units 2 and 3

The licensee proposed to change TS Section 3.9.B. Currently TS Section 3.9.B reads as follows:

3. With one diesel generator inoperable, restore the inoperable diesel generator and associated emergency bus to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

The amended TS section would read:

3.a. With one diesel generator inoperable:

1. Verify correct breaker alignment, required equipment available, and indicated power available for the Conowingo line immediately and once per 12 hours thereafter;

AND

2. Restore the diesel generator to operable status within 14 days from the time that the diesel generator became inoperable.

3.b. If the requirements of 3.9.B.3.a.1 above cannot be met, either:

1. Restore the diesel generator within the next 7 days (not to exceed 14 days from the time that the diesel generator became inoperable);

OR

2. Satisfy the requirements of 3.9.B.3.a.1 above within the next 7 days and restore the diesel generator within 14 days from the time that the diesel generator became inoperable.

3.c If the requirements of 3.9.B.3.a.2 or 3.9.B.3.b cannot be met, then be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

2.2 Proposed Addition to TS Section 3.9.B.8 for PBAPS Units 2 and 3

The licensee proposed to add TS Section 3.9.B.8, which reads as follows:

3.9.B.8 With the Conowingo line not available for 15 days, notify the NRC.

4.9.B.8 Verify once/month correct breaker alignment, required equipment available, and indicated power available from the Conowingo line.

2.3 Proposed Addition to TS Bases Section 4.9 for PBAPS Units 2 and 3

The licensee proposed to add the following information to TS Section 4.9:

Verification of the Conowingo line may include a combination of:

- 1) circuit breaker line-up on the Conowingo side (Susquehanna Substation) is verified by Unit 1, PBAPS being powered from Conowingo line,
- 2) circuit breaker verification of PBAPS Unit 2 and 3 switchgear, and
- 3) communication with the Conowingo Control Room to ensure that required equipment at Conowingo is available.

The extended diesel generator outage afforded by an available Conowingo tie line is intended to allow completion of the diesel generator overhaul; however, subject to the diesel generator reliability program, INPO performance criteria, and good operating practices, extended diesel generator outages are permitted for other reasons. Activities or conditions that increase the probability of a loss of offsite power (i.e., switchyard maintenance or severe weather) should be considered when scheduling a diesel generator outage. In addition, the effect of other plant equipment being out of service should be considered when scheduling a diesel generator outage. The staff's evaluation of the licensee's response is provided below. The conditions discussed below correspond to the commitments requested by the staff in the April 7, 1995 letter.

In response to condition 1, the licensee stated that the current TS include a limiting condition for operation (LCO) 3.0.D that states that a system, subsystem, train, component, or device that is determined to be inoperable solely because its emergency power source is inoperable (i.e., the EDG is out of service for preventive maintenance) may be considered operable for the purpose of satisfying its LCO if all of its redundant systems, subsystems, trains, components, and devices are operable. Unless this condition is satisfied, the unit shall be placed in Hot Shutdown within 6 hours and in Cold Shutdown within 36 hours.

This LCO provides a positive measure for preventing the testing and maintenance of any redundant system, subsystem, train, component, or device that renders that equipment inoperable. Testing of systems, subsystems, trains, components, and devices that does not render that equipment inoperable [i.e., TS-required emergency core cooling system (ECCS) testing] can be performed without invoking the restrictions of LCO 3.0.D. The licensee considers LCO 3.0.D to be an adequate, positive measure for controlling testing and maintenance during EDG outages. Accordingly, no additional changes to the TS are proposed. The staff finds this response acceptable based on the existing TS requirements.

In response to condition 2, the licensee stated that the overall EDG unavailability used in the probabilistic risk assessment (PRA) supporting the

EDG AOT was 30 days per EDG per year, for a total of 120 days per year. The licensee maintains an overall average goal of EDG availability of 0.975. This goal corresponds to 36.5 days of EDG unavailability per year $[(1-0.975) \text{ times } (365 \text{ days}) \text{ times } (4 \text{ EDGs})]$. Considerable margin exists between the unavailability goal of 36.5 days per year and the value assumed in the PRA of 120 days per year. The 0.975 EDG availability goal is based on an Institute of Nuclear Power Operations (INPO) performance indicator. This performance indicator is monitored, and results are reported to station managers. At present, implementation of the maintenance rule for the EDG is scheduled for the summer of 1995, and it is anticipated that an availability performance indicator derived from the INPO performance indicator will be the performance criterion. Based on the licensee's response, the staff concludes that overall unavailability of the EDGs will be adequately controlled by the licensee.

The licensee amended the TS change request to provide verification of the availability of the Conowingo tie line when an EDG is inoperable.

Regarding condition 4, the licensee stated that on-line maintenance is controlled and scheduled through the Unit Coordinator. The Unit Coordinator is trained in the interactions of systems and is responsible for assessing the impact of removing a system from service on the overall probabilistic safety assessment (PSA). To minimize the impact on the PSA, procedural guidance has been issued. This procedure, AG-43, "Guideline for the Performance of System Outages," is designed to provide decision-making and planning guidance for the execution of system outages based on PSA insights and sound operating judgment. This procedure incorporates guidance from both the NRC and INPO and provides instructions for scheduling and planning system outages and maintenance activities during power operation. This guidance is also intended to be referenced when emergent work affects ongoing planned system outages. The procedure includes the following guidance:

- 1) Use sound operating judgment and PSA insights to determine system outage frequency and duration.
- 2) Do not schedule outages on systems important to PSA during a planned plant transient.
- 3) If an EDG is inoperable, maintenance of systems and components should only be performed in accordance with GP-23, "Diesel Generator Outages." (This procedure provides guidance on equipment that may be affected by an EDG being out of service.)

The licensee also stated that the frequency of the EDG preventive maintenance is not dictated by convenience, but rather by the manufacturer's recommendations. The licensee is participating in an industry effort to reevaluate this schedule. Based on the above discussion, the staff concludes that the licensee has adequate controls in place for voluntary entry into limiting conditions for operation to perform maintenance.

Regarding condition 5, the licensee stated that it concurs with this philosophy which is incorporated into the operation of PBAPS. If an LCO is entered, the reason is monitored and tracked by station managers. If an LCO is entered inappropriately, the station managers will take corrective actions.

The staff finds that, based on the licensee's response, the licensee has adequate controls in place for voluntary entry into limiting conditions for operation to perform maintenance.

In response to condition 6, the licensee stated that LCO 3.0.D prevents removing a safety system from service when an EDG is unavailable to provide power to a redundant safety system. Further, AG-43, "Guidance for the Performance of System Outages," includes guidance on the impact of removing a system from service. Some systems, because of their redundant function, should not be removed from service when another system is out of service, although some systems may best be taken out of service when a compatible system is removed from service. This synergistic effect is controlled and monitored by AG-43 and the effect of non-safety systems is analyzed as well. The staff concludes, based on the licensee's response, that the licensee has adequate controls in place to ensure that the removal of safety systems for maintenance while EDGs are inoperable is minimized.

Regarding condition 7, the licensee stated that with an EDG removed from service, the likelihood for transients involving a loss of offsite power (LOOP), and electrical distributions should be minimized. Accordingly, PBAPS has implemented AG-43 to provide guidance on the interaction of systems. Further, to minimize the likelihood of these transients, AG-101, "Implementation Document for Substation Interface Agreement Operating Activities," has been developed. This procedure defines the role and responsibilities of station personnel and the offsite power system director. These responsibilities include having the Power System Director notify the Unit Coordinator of scheduled work activities or severe weather that could increase the likelihood of a LOOP. Based on the licensee's response, the staff concluded that the licensee has adequate controls in place to ensure that actions which may increase the likelihood of a plant transient during periods of EDG maintenance are minimized.

In response to condition 8, the licensee stated that PBAPS has implemented AG-108, "Preparation for Severe Weather." This procedure and the emergency response procedures provide guidance to station personnel on the appropriate actions to take in anticipation of severe weather. These recommendations include returning any EDG or other equipment important to safety to operable status. Based on the licensee's response, the staff concluded that the licensee has adequate controls in place to ensure that equipment important to safety, including EDGs, are not scheduled for maintenance during expected adverse weather.

Regarding condition 9, the licensee stated that this condition appears to be contrary to guidance issued by both the NRC and the EDG manufacturer. Generic Letter (GL) 84-15, "Proposed Staff Actions to Improve and Maintain Diesel

Generator Reliability," stated the staff's concern about the number of additional EDG tests that were required by TS for some operating plants licensed earlier. The staff has concluded that excessive testing results in degradation of the EDGs. The licensee submitted a series of TS change requests in response to GL 84-15 to eliminate the requirement to test the remaining three EDGs when one EDG was inoperable, provided that it had been determined that the inoperability was not due to a common-cause failure. The NRC reviewed and approved this request in a safety evaluation dated April 5, 1994.

The EDG manufacturer has also issued guidance stating that unloaded starts of the EDG should be minimized because of a concern about fuel accumulating in the exhaust manifold. The relatively low exhaust temperature of low loaded operation prevents this fuel from vaporizing and could cause a fire in the exhaust manifold.

The licensee believes that this increased testing in accordance with condition 9 is unnecessary because no additional assurance of EDG operability is developed, and the testing is imprudent to perform because it is injurious to the EDG. On the basis of this information, the licensee decided not to include the additional testing requirement of condition 9 in the TS.

The staff reviewed the licensee's response to condition 9 and concluded that existing EDG testing requirements were adequate and that additional testing during periods when one EDG was inoperable were not necessary.

For the reasons described above, including the discussion of a 14-day AOT and the licensee's response to each of the commitments requested in the April 7, 1995 letter, 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

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on August 10, 1995 (60 FR 40866). Accordingly, based upon the environmental assessment, the staff has determined that the issuance of the amendment will not have a significant effect on the quality of the human environment.

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: A. Pal

Date: August 16, 1995

UNITED STATES NUCLEAR REGULATORY COMMISSIONPECO ENERGY COMPANYDOCKET NOS. 50-277 AND 50-278NOTICE OF ISSUANCE OF AMENDMENT TOFACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment Nos. 209 and 213 to Facility Operating Licenses Nos. DPR-44 and DPR-56 issued to PECO Energy Company (the licensee), which revised the Technical Specifications for operation of the Peach Bottom Atomic Power Station, Units 2 and 3, located in York County, Pennsylvania. The amendment is effective as of the date of issuance.

The amendment modified the Technical Specifications to provide for an increased allowed out-of-service time for the Peach Bottom emergency diesel generators based on the availability of a power tie-line from the Conowingo Hydroelectric Station.

The application for the amendment 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 amendment.

Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for a Hearing in connection with this action was published in the FEDERAL REGISTER on June 7, 1995 (60 FR 30120). No request for a hearing or petition for leave to intervene was filed following this notice.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of the amendment will not have a significant effect on the quality of the human environment (60 FR 40866).

For further details with respect to the action see (1) the application for amendment dated April 7, 1994 and supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995, (2) Amendment Nos. 209/213 to Licenses Nos. DPR-44 and DPR-56, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street NW., Washington, DC, and at the local public document room located at Government Publications Section, State Library of Pennsylvania, (REGIONAL DEPOSITORY) Education Building, Walnut Street and Commonwealth Avenue, Box 1601, Harrisburg, Pennsylvania.

Dated at Rockville, Maryland, this 16th day of August 1995.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

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

DISTRIBUTION:

Docket File
PDI-2 Reading
JStolz
MO'Brien
JShea/FRinaldi
OGC

OFC	: PDI-2/EA	: PDI-2/PM	: OGC	: PDI-2/D	:	:
NAME	: MO'Brien	: JShea	:	: JStolz	:	:
DATE	: 7/12/95	: 07/27/95	: 8/1/95	: 8/4/95	:	:

OFFICIAL RECORD COPY

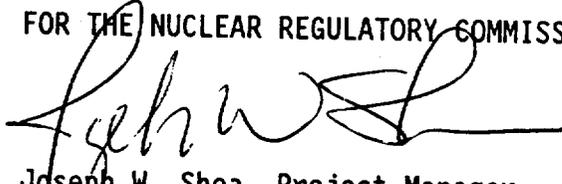
DOCUMENT NAME: G:\SHEA\PEACH\PB89243.BWI

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of the amendment will not have a significant effect on the quality of the human environment (60 FR 40866).

For further details with respect to the action see (1) the application for amendment dated April 7, 1994 and supplemented by letters dated June 2 and September 6, 1994 and June 16 and July 13, 1995, (2) Amendment Nos. 209/2130 Licenses Nos. DPR-44 and DPR-56, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street NW., Washington, DC, and at the local public document room located at Government Publications Section, State Library of Pennsylvania, (REGIONAL DEPOSITORY) Education Building, Walnut Street and Commonwealth Avenue, Box 1601, Harrisburg, Pennsylvania.

Dated at Rockville, Maryland, this 16th day of August 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



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