

Exelon Nuclear 200 Exelon Way Kennett Square, PA 19348



10 CFR 50.12

October 5, 2007

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555-0001

> Peach Bottom Atomic Power Station, Units 2 and 3 Renewed Facility Operating License Nos. DPR-44 and DPR-56

NRC Docket Nos. 50-277 and 50-278

Subject:

Request for Exemption from 10 CFR 50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability"

References:

- 1. Letter from J. W. Shea, USNRC, to G. A. Hunger, PECO Energy, "Peach Bottom Atomic Power Station, Units 2 and 3, Fire Protection Program," dated September 16, 1993.
- 2. Letter from J. S. Kemper, Philadelphia Electric Company, to D. R. Muller, USNRC, "Peach Bottom Atomic Power Station Fire Protection Program" [FPP Revision 0], dated September 30, 1986.
- 3. Letter from D. R. Helwig, Philadelphia Electric Company, to USNRC, "Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report," dated July 20, 1989.
- 4. Letter from D. M. Smith, Philadelphia Electric Company, to USNRC, "Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report," dated July 20, 1990.

In accordance with 10 CFR 50.12, "Specific exemptions," Exelon Generation Company, LLC (Exelon) hereby requests an exemption from the provisions of 10 CFR 50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability" for the use of operator manual actions for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, in lieu of the requirements specified in Section III.G.2. This exemption is being requested in accordance with the requirements of 10 CFR 50.12(a)(2)(ii) since the application of the regulation in this particular circumstance is not necessary to achieve the underlying purpose of the rule.

The manual actions addressed in this exemption request are those that were previously included in correspondence with the NRC, and were subsequently found acceptable in a Fire Protection Safety Evaluation Report. Reference 1 is a Safety Evaluation Report (SER) that specifically accepts the operator manual actions contained in the PBAPS Fire Protection Program (FPP), Table A-4 through Revision 4. The PBAPS FPP is considered part of the Updated Final Safety Analysis Report (UFSAR) and is subject to the update requirements in 10 CFR 50.71(e). References 2 through 4 contain the submittals to the NRC referenced in the SER or contain revisions of the FPP Table A-4 that were provided to the NRC as part of the UFSAR update process through Revision 4.

10 CFR 50.12 Exemption Request Operator Manual Actions Docket Nos. 50-277 and 50-278 October 5, 2007 Page 2

In accordance with Regulatory Issue Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions," an approved exemption is required for all operator manual actions, even those that were accepted in a previously issued NRC SER. This exemption request is limited to those manual actions that were previously accepted in a NRC SER for PBAPS. Attachment 2 contains a list of the specific manual actions for which an exemption is being requested.

PBAPS credits other manual actions for post fire safe shutdown. Some of these actions were included in specific exemption requests that were approved by the NRC in SERs. In accordance with RIS 2006-10, manual actions included in an approved exemption require no additional action by the licensee or the NRC. PBAPS has other manual actions that were not previously addressed by the NRC in an SER which are part of the post-fire safe shutdown process to achieve hot shutdown. The use of these manual actions will be included in a separate exemption request. PBAPS also has some manual actions needed only to reach cold shutdown. RIS 2006-10 does not require NRC approval for these manual actions.

This exemption request will not result in undue risk to the public health and safety because Exelon has determined that the subject manual actions are feasible and the NRC has already found these manual actions to be acceptable for use in achieving post-fire safe shutdown. Therefore, the special circumstances for issuance of the exemption are satisfied in accordance with the requirements of 10 CFR 50.12(a)(2)(ii), since application of the rule is not necessary to achieve the underlying purpose of the rule. In addition, the requested exemption is authorized by law and is consistent with the common defense and security. Therefore, the requirements of 10 CFR 50.12(a)(1) are satisfied.

Information supporting the exemption request is contained in Attachments 1 and 2 to this letter. Exelon requests approval of this exemption request by October 5, 2008.

If you have any questions or require additional information, please contact Glenn Stewart at 610-765-5529.

Respectfully,

Pamela B. Cowan

Director, Licensing and Regulatory Affairs

Exelon Generation company, LLC

Attachments: 1. Operator Manual Actions Exemption Request

2. List of Operator Manual Actions

cc: Regional Administrator - NRC Region I

NRC Senior Resident Inspector - PBAPS NRC Project Manager, NRR - PBAPS w/attachments

11

ATTACHMENT 1 OPERATOR MANUAL ACTIONS EXEMPTION REQUEST

I. SPECIFIC EXEMPTION REQUEST

In accordance with 10 CFR 50.12, "Specific exemptions," Exelon Generation Company, LLC (Exelon) hereby requests an exemption from the requirements of 10 CFR 50, Appendix R (Reference 1), Section III.G, "Fire Protection for Safe Shutdown Capability," for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, to the extent that operator manual actions are necessary to achieve and maintain hot shutdown for fire areas in which both trains of safe shutdown cables/equipment are routed through the same fire area.

Background:

The criteria for granting specific exemptions from 10 CFR 50 regulations are specified in 10 CFR 50.12. In accordance with 10 CFR 50.12(a)(1), the NRC is authorized to grant an exemption upon determining that the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

Regulatory Issue Summary (RIS) 2006-10 (Reference 2) documents the NRC position relative to the use of operator manual actions as part of a compliance strategy to meet the requirements of 10 CFR 50, Appendix R, III.G.2. The NRC requires that plants which credit manual actions for Section III.G.2 compliance obtain specific NRC approval for the manual action via the exemption process in accordance with the requirements of 10 CFR 50.12. RIS 2006-10 addresses operator manual actions that were previously approved outside the exemption process as stated below:

"For pre-1979 licensees, a staff decision in a safety evaluation report (SER) that approves the use of operator manual actions, in lieu of one of the means specified in paragraph III.G.2, does not eliminate the need for an exemption. Pre-1979 licensees who have SERs, but not a corresponding exemption, which approve manual actions should request an exemption under 10 CFR Part 50.12, citing the special circumstances of section 50.12(a)(2)(ii), citing the SER as the safety basis, and confirming that the safety basis established in the SER remains valid. The staff expects to grant the exemption on these bases without further review."

10 CFR 50.12(a)(2)(ii) states, "Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule."

II. BASIS FOR EXEMPTION REQUEST

This exemption request is limited to those operator manual actions currently credited for 10 CFR 50, Appendix R, Section III.G.2 compliance that were previously found acceptable for PBAPS by the NRC in a Safety Evaluation Report (SER). The basis for this exemption request is the special circumstances cited in 10 CFR 50.12(a)(2)(ii) that, since the manual actions which are the subject of this exemption request have already been found acceptable by the NRC in a prior SER, application of the rule in this circumstance is not necessary to achieve the underlying purpose of the rule. References to the documentation that supports the inclusion of these manual actions as previously accepted is provided. The operator manual actions that are the

subject of this exemption request are essentially unchanged from their original acceptance; therefore, the original safety basis remains valid.

Demonstration that Manual Actions are Previously Approved

In a letter dated September 16, 1993 (Reference 3), the NRC transmitted a SER on the PBAPS Fire Protection Program (FPP). Section 2.6 of the SER, "Manual Actions," specifically addresses operator manual actions that are needed for each of the shutdown methods utilized at PBAPS. Manual actions are also described in Sections 2.5.1, 2.5.3 and 2.7 of the SER. For convenience, Section 2.6 of this SER is repeated below:

"Each of the four shutdown methods identified by the licensee in the FPP, (Methods A, B, C, and D), require that manual actions be performed outside of the control room to achieve shutdown following fires in certain fire areas. Table A-4 of the FPP describes the manual operations that may be required and the fire areas that may require manual actions. The actions specified in Table A-4 are incorporated into the T-300 Fire Guide series of specific station procedures.

The NRC staff had questioned the acceptability of some of the specific manual actions, contending in IR [Inspection Report] 87-30 that these actions constituted repairs which are not allowed by Appendix R to achieve hot shutdown. This was identified as Open Item 87-30-02 in IR 87-30. PECo responded to the open item by letter dated May 11, 1988. In the response, PECo provided a rationale for considering the questionable actions as manual operations. The licensee contended that the actions, which included fuse pulling and manual operation of motor-operated valves from motor control centers, were necessary for the operator to gain positive control of the equipment and to aid in proper local operation. The NRC staff reviewed the licensees justifications and concluded that they were acceptable. The open item was closed in IR 88-41 of November 14, 1988. Based on the review conducted as part of Inspection Report 87-30 and the closure of Open Item 87-30-02, the NRC staff finds the manual operations described in the FPP acceptable."

Revision 0 of the PBAPS FPP was submitted to the NRC by letter dated September 30, 1986 (Reference 4). The FPP is considered part of the Updated Final Safety Analysis Report (UFSAR) and is subject to the update requirements in 10 CFR 50.71(e). Subsequent revisions of the FPP that contained changes to Table A-4 (up to the time the SER was issued) were submitted to the NRC by letters dated July 20, 1989 (Reference 5) and July 20, 1990 (Reference 6). Clarifying information regarding manpower for manual actions, and certain plant modifications involving manual actions were provided to the NRC by letter dated October 16, 1987 (Reference 7). Clarifying information regarding certain manual actions was also provided to the NRC by letter dated May 11, 1988 (Reference 8). Clarifying information regarding procedural guidance for manual actions was provided to the NRC by letter dated March 23, 1989 (Reference 9). The 1993 NRC SER notes that the FPP through Revision 4 is included in the SER review. As noted, FPP Table A-4 provides a list of operator manual actions needed to achieve safe shutdown (both for III.G.1 and III.G.2 areas as well as III.G.3). Operator manual actions from PBAPS FPP Table A-4, Revision 4, for which an exemption is being requested, are summarized in Attachment 2.

Each of the manual actions at PBAPS have been subject to a manual action feasibility review. This review considered the manual action attributes that are contained in NRC Inspection Procedure IP71111.05T (Reference 10). This review determined that the manual actions are

feasible and can be reliably performed. The results of this review were captured in an Exelon Issue Report and are available for review by the NRC. Additionally, as documented in the 1993 SER (Reference 3), the NRC reviewed the feasibility of the operator manual actions through Inspections 87-30 (Reference 11), 88-41 (Reference 12), and 92-31 (Reference 13), and found the actions to be acceptable. Also, Triennial Fire Protection Inspections performed in 2003 and 2006, using the criteria provided in NRC Inspection Procedure 71111.05T, reviewed the feasibility of a number of the manual actions and found them to be feasible. The results of these reviews by both Exelon and the NRC confirm that the safety basis of the original SER remains valid.

There is no law that precludes the activities covered by this exemption request, and the requested exemption has no impact on the common defense and security. Therefore, based on the above discussion, the criteria of 10 CFR 50.12(a)(1) are satisfied in that the requested exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

III. ENVIRONMENT ASSESSMENT

The exemption request provides a formal vehicle for NRC approval of operator manual actions associated with Appendix R post-fire safe shutdown. These operator manual actions have been previously accepted by the NRC in prior correspondence. The results of reviews by both Exelon and the NRC confirm that the operator manual actions are feasible and that the safety basis of the original SER remains valid. Application of the rule in this circumstance is not necessary to achieve the underlying purpose of the rule.

The proposed exemption will not significantly increase the probability or consequences of accidents, no changes are being made in the types or quantities of any radiological effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed exemption. In addition, the proposed exemption does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological impacts associated with the proposed exemption. As a result, in accordance with the requirements of 10 CFR 51.32, the proposed exemption will not have a significant effect on the quality of the human environment.

IV. CONCLUSION

The requested exemption will not result in undue risk to the public health and safety because Exelon has determined that the subject manual actions are feasible and the NRC has already found these manual actions to be acceptable for use in achieving post-fire safe shutdown. Therefore, the special circumstances for issuance of the exemption are satisfied in accordance with the requirements of 10 CFR 50.12(a)(2)(ii), since application of the rule is not necessary to achieve the underlying purpose of the rule. In addition, the requested exemption is authorized by law, and is consistent with the common defense and security.

V. REFERENCES

- 1. 10 CFR 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979."
- Regulatory Issue Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.G.2 Operator Manual Actions," dated June 30, 2006.

- 3. Letter from J. W. Shea, USNRC, to G. A. Hunger Jr., PECO Nuclear, "Peach Bottom Atomic Power Station, Units 2 and 3, Fire Protection Program," dated September 16, 1993.
- 4. Letter from J. S. Kemper, Philadelphia Electric Company, to D. R. Muller, USNRC, "Peach Bottom Atomic Power Station Fire Protection Program" [FPP Revision 0], dated September 30, 1986.
- 5. Letter from D. R. Helwig, Philadelphia Electric Company, to USNRC, "Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report," dated July 20, 1989.
- 6. Letter from D. M. Smith, Philadelphia Electric Company, to USNRC, "Peach Bottom Atomic Power Station, Units 2 and 3, Updated Final Safety Analysis Report," dated July 20, 1990.
- 7. Letter from J. W. Gallagher, Philadelphia Electric Company, to W. R Butler, USNRC, "Peach Bottom Atomic Power Station Response to Fire Protection Open Items," dated October 16, 1987.
- 8. Letter from J. W. Gallagher, Philadelphia Electric Company, to W. R. Butler, USNRC, "NRC Inspection Report Nos. 50-277/87-30 and 50-278/87-30, dated December 4, 1987," dated May 11, 1988.
- 9. Letter from S. J. Kowalski, Philadelphia Electric Company, to USNRC, "10 CFR 50, Appendix R Multiple High Impedance Faults Peach Bottom Atomic Power Station," dated March 23, 1989.
- 10. NRC Inspection Procedure IP 71111.05T, "Fire Protection [Triennial]," dated April 21, 2006.
- 11. Letter from W. V. Johnston, USNRC, to J. W. Gallagher, Philadelphia Electric Company, "Combined Inspection Report Nos. 50-277/87-30 and 50-278/87-30," dated December 4, 1987.
- 12. Letter from T. T. Martin, USNRC, to C. A. McNeill, Philadelphia Electric Company, "Combined Inspection Report Nos. 50-277/88-41 and 50-278/88-41," dated November 14, 1988.
- 13. Letter from J. P. Durr, USNRC, to D. M. Smith, Philadelphia Electric Company, "Inspection Report Nos. 50-277/92-31 and 50-278/92-31," dated December 15, 1992.

ATTACHMENT 2 LIST OF OPERATOR MANUAL ACTIONS

EQUIPMENT	ACTION REQUIRED	ACTION LOCATION (Description, Room No., Fire Area)	FOR FIRES IN FIRE AREAS	COMMENTS
20C32	Install U2 plug-in test switch 2- 10A-J1A at 20C032	Cable Spreading Room (CSR), Rm 302, FA 25	2,57	Note 1, Note 2
2BS456	Verify Breaker 52-6011 at E234-T-B is Closed prior to operating switch 2BS456. Operate switch 2BS456 to restore power to Battery	 E-23 Bus Room, Rm 263, FA 35. E-42 Bus Room, Rm 226, FA 36. 	2, 4, 6S, 57	Note 1
2DS456	Charger 2BD003. 1. Verify Breaker 52-6022 at E234-T-B is closed prior to operating switch 2DS456. 2. Operate switch 2DS456 to restore power to Battery Charger 2DD003.	1. E-23 Bus Room, Rm 263, FA 35. 2. E-42 Bus Room, Rm 226, FA 36.	2, 6S, 38, 57	Note 1
30C033	Insert U3 plug-in test switch 3- 10A-J1B at 30C033 to disable 2AP35 pump trip	CSR Rm 302, FA 25	2, 57	Note 1
30S546	Operate switch 30S546 to restore power to 30C144 from 20Y033	CSR Rm 302, FA 25	13N	
3AS456	 Verify Breaker 52-5934 at E124-T-B is closed prior to operating switch 3AS456. Operate switch 3AS456 to restore power to Battery Charger 3AD003. 	E-12 Bus Room, Rm 227, FA 39. E-33 Bus Room, Rm 261, FA 32.	13N	
3CS456	Verify Breaker 52-5911 at E124-T-B is closed prior to operating switch 3CS456. Operate switch 3CS456 to restore power to Battery Charger 3CD003.	 E-12 Bus Room, Rm 227, FA 39. E-33 Bus Room, Rm 261, FA 32. 	13N, 13S, 26, 57, 58	Note 1, Note 3
E134-W-A	Open Breaker at E134-W-A for	U3 RBCCW, Rm	13N	
(30B036) E234-D-A (00B054)	MO3-10-089A Open Breaker at E234-D-A for MO-2486	162, FA 2 E2 D/G, Rm 817, FA 45	50, 54	
E234-D-A (00B054)	Open Breaker at E234-D-A for MO-3486	E2 D/G, Rm 817, FA 45	50, 54	
E234-D-A (00B054)	Open valve MO-2486 at MCC 00B054	E2 D/G, Rm 817, FA 45	4, 38, 57	Note 1
E234-D-A (00B054)	Open valve MO-3486 at MCC 00B054	E2 D/G, Rm 817, FA 45	57, 58	Note 1, Note 3
E324-R-B (20B038)	Open breaker at E324-R-B for MO2-10-034A	U2 Reactor Bldg (RB), Rm 212, FA 6S	4, 57	Note 1
E324-R-B (20B038)	Open breaker at E324-R-B for MO2-10-039A	U2 RB, Rm 212, FA 6S	4, 57	Note 1

EQUIPMENT	ACTION REQUIRED	ACTION LOCATION (Description, Room No., Fire Area)	FOR FIRES IN FIRE AREAS	COMMENTS
E334-R-B (30B038)	Open breaker at E334-R-B for MO3-10-034A	U3 RB, Rm 257, FA 13S	13N, 26	
E334-R-B (30B038)	Open breaker at E334-R-B for MO3-10-039A	U3 RB, Rm 257, FA 13S	13N, 26	
E424-W-A (20B039)	Open breaker at E424-W-A for MO2-10-034B	U2 RBBCW, Rm 105, FA 2	6S	
E424-W-A (20B039)	Open breaker at E424-W-A for MO2-10-039B	U2 RBBCW, Rm 105, FA 2	6S	
E424-W-A (20B039)	Open breaker at E424-W-A for MO2-10-089D	U2 RBBCW, Rm 105, FA 2	6S	
E434-R-B (30B039)	Open breaker at E434-R-B for MO3-10-039B	U3 RB, Rm 250, FA 13N	2, 57, 58	Note 1, Note 3
E434-R-B (30B039)	Open breaker at E434-R-B for MO3-10-034B	U3 RB, Rm 250, FA 13N	2, 57, 58	Note 1, Note 3
E434-R-B (30B039)	Open breaker at E434-R-B for MO3-10-089D	U3 RB, Rm 250, FA 13N	58	Note 3
MO-2486	Manually open valve MO-2486	Cardox Rm, Rm 815, FA 54	50, 54	
MO-3486	Manually open valve MO-3486	Cardox Rm, Rm 815, FA 54	50, 54	
MO2-10-025B	Manually Open valve MO2-10- 25B	U2 RB, Rm 204, FA 6N	6S	
MO2-10-034A	Manually Open valve MO2-10- 34A	U2 Torus, Rm 1, FA 5	4, 57	Note 1
MO2-10-034B	Manually Open valve MO2-10- 34B	U2 Torus, Rm 1, FA 5	6S	
MO2-10-039A	Manually Open valve MO2-10- 39A	U2 Torus, Rm 1, FA 5	4, 57	Note 1
MO2-10-039B	Manually Open valve MO2-10- 39B	U2 Torus, Rm 1, FA 5	6S	
MO2-10-089D	Manually Open valve MO2-10- 89D	U2 RHR, Rm 104, FA 2	6S	
MO3-10-025A	Manually Open valve MO3-10- 025A	U3 RB, Rm 248, FA 13S	13N	
MO3-10-034A	Manually open valve MO3-10- 034A	U3 Torus, Rm 37, FA 12	13N, 26	
MO3-10-034B	Manually open valve MO3-10- 034B	U3 Torus, Rm 37, FA 12	2, 57, 58	Note 1, Note 3
MO3-10-039A	Manually open valve MO3-10- 039A	U3 Torus, Rm 37, FA 12	13N, 26	
MO3-10-039B	Manually open valve MO3-10- 039B	U3 Torus, Rm 37, FA 12	2, 57, 58	Note 1, Note 3
MO3-10-089A	Manually open valve MO3-10- 089A	U3 RHR, Rm 156, FA 2	13N	
MO3-10-089D	Manually close valve MO3-10- 089D	U3 RHR, Rm 159, FA 10	58	Note 3
N2-10-025B	Open breaker for MO2-10-025B at swing bus N2-10-025B	U2 RB, Rm 205, FA 6N	6S	
N3-10-025A	Open breaker for MO3-10-025A at swing bus N3-10-025A	U3 RB, Rm 257, FA 13S	13N	

EQUIPMENT	ACTION REQUIRED	ACTION LOCATION (Description, Room No., Fire Area)	FOR FIRES IN FIRE AREAS	COMMENTS
N3-10-025B	Open valve MO3-10-025B at swing bus N3-10-025B	U3 RB, Rm 250, FA 13N	13S	

- Note 1: Fire Area 57 was originally part of Fire Area 2 and was subsequently made a separate fire area.
- Note 2: This action has been slightly modified from that described in the original submittal to make the action simpler to perform; however, the action location, timing and outcome are the same.
- Note 3: Fire Area 58 was originally part of Fire Area 2 and was subsequently made a separate fire area.