

## NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-277 and 50-278; NRC-2009-0033]

### Exelon Generation Company, LLC and PSEG Nuclear, LLC Peach Bottom Atomic Power Station Unit Nos. 2 and 3; Exemption

#### 1.0 Background

The Exelon Generation Company (Exelon, the licensee in addition to PSEG Nuclear, LLC) is the holder of Facility Operating License Nos. DPR-44 and DPR-56 which authorize operation of the Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3. The licenses provide, among other things, that the facility is subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of two boiling-water reactors located in York and Lancaster Counties, Pennsylvania.

#### 2.0 Request/Action

Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.48, requires that nuclear power plants that were licensed before January 1, 1979, must satisfy the requirements of 10 CFR part 50, Appendix R, Section III.G, "Fire protection of safe shutdown capability." PBAPS Units 2 and 3 were licensed to operate prior to January 1, 1979. As such, the licensee's Fire Protection Program (FPP) must satisfy the established fire protection features of 10 CFR part 50, Appendix R, Section III.G. NRC Regulatory Information Summary (RIS) 2006-10, "Regulatory Expectations with Appendix R Paragraph III.G.2, Operator Manual Actions," noted that NRC inspections identified that some licensees had relied upon operator manual actions, instead of the options specified in 10 CFR part 50, Appendix R, Section III.G.2 as a permanent solution to resolve issues related to Thermo-Lag 330-1 fire barriers.

In a letter dated October 5, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession Number ML072820129), the licensee identified 25 operator manual actions that were previously included in correspondence with the NRC and found acceptable in a fire protection-related Safety Evaluation (SE) dated September 16, 1993 (ADAMS Accession Number ML081690220). However, RIS 2006-10 identifies that an exemption under 10 CFR 50.12 is necessary for use of the manual actions in lieu of the

requirements of 10 CFR part 50, Appendix R, Section III.G.2 even if the NRC previously issued an SE that found the manual actions acceptable. This exemption provides the formal vehicle for NRC approval for the use of the specified operator manual actions instead of the options specified in 10 CFR part 50, Appendix R, Section III.G.2 for PBAPS Units 2 and 3.

In summary, by letter dated October 5, 2007, and supplemental letters dated May 1, 2008, and December 11, 2008 (ADAMS Accession Numbers ML081220873 and ML083470170) responding to the NRC staff's request for additional information, Exelon submitted a request for exemption from 10 CFR Part 50, Appendix R, Section III.G, "Fire Protection of Safe Shutdown Capability," for the use of 25 operator manual actions as described in Table 1 in lieu of the requirements specified in Section III.G.2.

#### 3.0 Discussion

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when: (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present. One of these special circumstances, described in 10 CFR 50.12(a)(2)(ii), is that the 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.

The underlying purpose of 10 CFR part 50, Appendix R, Section III.G.2 is to ensure that one of the redundant trains necessary to achieve and maintain hot shutdown conditions remains free of fire damage in the event of a fire. Section III.G.2 provides the following means to ensure that a redundant train of safe shutdown cables and equipment is free of fire damage, where redundant trains are located in the same fire area outside of primary containment:

- a. Separation of cables and equipment by a fire barrier having a 3-hour rating;
- b. Separation of cables and equipment by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards and with fire detectors and an automatic fire suppression system installed in the fire area; or
- c. Enclosure of cables and equipment of one redundant train in a fire barrier having a 1-hour rating and with fire detectors and an automatic fire

suppression system installed in the fire area.

Exelon indicated that the operator manual actions listed in their October 5, 2007, exemption request are those that were previously included in correspondence with the NRC and were found acceptable in a Fire Protection SE dated September 16, 1993 (ADAMS Accession Number ML081690220). The introductory letter to this SE states, in part,

The NRC staff has completed a review of the "Fire Protection Program" document through Revision 4 as well as certain other documents related to the implementation of Appendix R requirements. The enclosed safety evaluation (SE) concludes that the safe shutdown capability at Peach Bottom, as described in the PBAPS Fire Protection Program, with approved exemptions, satisfies the requirements of Section III.G and III.L of Appendix R to 10 CFR Part 50.

Section 2.6 titled "Manual Operations," of the September 16, 1993, SE states, in part,

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. [\* \* \*] 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.

A cross reference between Table A-4 of the PBAPS Units 2 and 3 FPP, Revision 3, titled "Operations that may be Required to be Performed Outside the Control Room," and the operator manual actions identified in the October 5, 2007, Request for Exemption was provided in table format in the May 1, 2008, Response to Request for Additional Information. This information is provided in Table 1 of this exemption titled, "Cross-Reference Between Peach Bottom Fire Protection Program, Revision 3, Table A-4 and Operator Manual Actions." There are a total of 25 operator manual actions listed in the exemption that occur in 11 different fire areas.

Exelon indicated in the May 1, 2008, Response to Request for Additional Information that in several cases, certain individual operator manual actions that were approved in the SE are divided into separate tasks for clarity as part of the exemption request. Also, in several cases, additional tasks are specified. The additional tasks are listed when the tasks are performed in a different room from the main action. Exelon states that this was done to clearly identify the

areas in which the manual actions are performed and are not new actions that did not previously exist.

In the December 11, 2008, Response to Request for Additional Information, the licensee outlined the approach that was taken to evaluate and assess the effectiveness of the operator manual actions included in the request. The cross-reference information provided in Table 1 provides an explanation for where each operator manual action is located and the role of the actions in achieving safe shutdown. The response also contains a discussion and justification for why the operator manual actions are appropriate for maintaining consistency with the intent of Section III.G.2 of Appendix R.

The NRC staff reviewed the licensee's evaluation in support of the subject exemption request for the use of operator manual actions in lieu of the requirements specified in Section III.G.2 of Appendix R, and concluded that given the existing fire protection features in the affected fire zones, Exelon continues to meet the underlying purpose of 10 CFR Part 50, Appendix R, Section III.G.2 for the PBAPS Units 2 and 3 fire areas described in Table 1. The following technical evaluation provides the basis for this conclusion.

### 3.1 Fire Prevention

Fire areas 2, 6S, 13N, 13S, 26, 38, 54 and 57 all have limited or low combustible fuel loading (equivalent fire severity of less than 45 minutes) and fire areas 4, 50 and 58 have low to moderate combustible fuel loading (equivalent fire severity of less than 105 minutes). Fire area 50 also contains some individual rooms, such as the lube oil rooms, that include high combustible fuel loading (equivalent fire severity of greater than 105 minutes). Areas with moderate or greater fuel loading have adequate detection and suppression systems appropriate for the hazard as described below.

The primary fixed ignition sources in the areas are limited to cables and electrical equipment. It is noted that in all areas where a postulated fire included an electrical cable fire, all exposed cables have fire retardant insulation material and that the use of wood is restricted to fire retardant wood (except for large cribbing).

The NRC staff finds that for all of the areas related to this exemption, the level of fire protection combined with the limited fuel load and minimal ignition sources in the fire areas associated with this exemption results in a low likelihood of a fire occurring and spreading to adjacent fire areas or equipment.

### 3.2 Detection, Control and Suppression

The NRC staff evaluated the fire detection, control and suppression systems associated with the areas related to this exemption. All fire areas included in this exemption have smoke detection systems installed. Fire areas 4, 13S, 26, 38, 54, 57 and 58 have full-area smoke detection coverage. Fire area 2 is provided with smoke or heat detection in most rooms with the exception of some of the radwaste pump and tank rooms that are locked high radiation areas. Fire areas 6S and 13N have smoke detection coverage on each elevation except the refueling floor, where there are no cables associated with safe shutdown. Fire area 50 has smoke and/or heat detection systems installed in certain individual rooms within the turbine building to address specific fire hazards.

Fire areas 2, 4, 38, 57 and 58 also have full-area automatic fire suppression systems installed to mitigate any specific or elevated fire hazards in those areas. An example of a specific or elevated fire hazard would be the cable insulation, lube oil, charcoal filters or trash/paper noted as being postulated fires in fire area 2. These fire hazards are mitigated by the installation of carbon dioxide systems in each High Pressure Coolant Injection pump room, pre-action sprinklers over the motor generator set lube oil pumps, wet pipe sprinklers in the radwaste trash area and water spray for the charcoal filters that are part of the standby gas treatment system. Fire Area 57 is equipped with a pre-action sprinkler system to protect the corridor that passes between the 4kV bus rooms and the radwaste building.

Fire area 50 has fire detection and local automatic fire suppression systems installed in specific areas to suppress fires that may occur at the specific hazard source or to protect access through the area. For example, the licensee noted in the December 11, 2008, Response to Request for Additional Information, that some high combustible fuel load areas, such as the lube oil, moisture separator, feed pump rooms, turbine bearings and the common hatch area, are located in fire area 50 and that these spaces were equipped with wet-pipe sprinkler systems. The licensee also noted that the hydrogen seal skid on each unit is equipped with an automatic deluge system and that a pre-action sprinkler system is installed over the 13kV switchgear cabinets in fire area 50.

The NRC staff finds that for the areas described in the request for exemption, the fire detection, control and

suppression systems are adequate to mitigate any specific or elevated fire hazards in those areas.

### 3.3 Preservation of Safe Shutdown Capability

The NRC staff has evaluated the feasibility review provided by the licensee in the December 11, 2008, Response to Request for Additional Information. The feasibility review documents that procedures are in place, in the form of Transient Response Implementing Plan procedures, to ensure that clear and accessible instructions on how to perform the manual actions are available to the operators. Several potential environmental concerns are also evaluated, such as radiation levels, temperature/humidity conditions and the ventilation configuration and fire effects that the operators may encounter during certain emergency scenarios. The licensee's feasibility review concluded that the operator manual actions were feasible because the operators performing the manual actions would not be exposed to adverse or untenable conditions during any particular operator manual action procedure or during the time to perform the procedure.

The NRC staff reviewed the required operator manual action completion time limits versus the time before the action becomes critical to safely shutting down the unit as presented in the feasibility analyses. In one case the action must be completed within 30 minutes. This action is identified in Table 1 as 30S546 and requires an operator to travel from the control room to the cable spreading room and perform the action of operating a key switch. The combined time to complete the travel and specified action requires a total of 5 minutes. Given the low complexity of this action the NRC staff finds that this action is feasible. In addition, the fire areas described in this exemption are separated from adjacent fire areas by fire-rated barriers or water curtains to provide a level of compartmentalization between the fire areas and/or buildings. This compartmentalization helps to ensure that fires will not spread to adjacent fire areas and that any fire damage will be limited to the fire area of origin. The NRC staff finds that there is a sufficient amount of time available to complete the proposed operator manual actions specified in Table 1 of this exemption.

### 3.4 Evaluation

As stated in 10 CFR Part 50, Appendix R, Section II:

The fire protection program shall extend the concept of defense-in-depth to fire protection with the following objectives:

1. To prevent fires from starting,
2. To detect rapidly, control, and extinguish promptly those fires that do occur, and
3. To provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

The NRC staff has evaluated the elements of defense-in-depth used for fire protection at PBAPS, applicable to the fire zones under review. Based upon consideration of the limited fire ignition sources and fire hazards in the affected areas, and the existing fire protection measures at PBAPS, the NRC staff concludes that objective one of defense-in-depth is adequately met.

Based on the evaluation of fire detection and suppression systems provided in the affected fire zones, the NRC staff determined that any postulated fire is expected to be promptly detected by the available automatic fire detection systems in the associated fire areas. The available fire detection and suppression equipment in these fire areas ensure that a postulated fire will not be left unchallenged. In addition, all fire areas are separated from adjacent fire areas by fire-rated barriers or water curtains to provide a level of compartmentalization between the fire areas and/or buildings. This compartmentalization helps to ensure that fires will not spread to adjacent fire areas and that any fire damage will be limited to the fire area of origin. In addition, when fires are contained in the fire area of origin, the licensee has demonstrated that the manual actions are feasible. Therefore, the NRC staff concludes that objectives 2 and 3 of defense-in-depth are adequately met.

Therefore, the NRC staff concludes that the requested exemption to use operator manual actions in lieu of the requirements of 10 CFR Part 50, Appendix R, Section III.G.2 is consistent with the defense-in-depth methodology necessary at nuclear power plants and will not impact PBAPS post-fire safe-shutdown capability.

### 3.5 Authorized by Law

This exemption would allow PBAPS the use of operator manual actions in lieu of meeting the requirements specified in 10 CFR Part 50, Appendix R, Section III.G.2. As stated above, 10 CFR 50.12 allows the NRC to grant exemptions from the requirements of 10 CFR Part 50. The NRC staff has determined that granting of the

licensee's proposed exemption will not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission's regulations because special circumstances exist that warrant the use of the operator manual actions to achieve safe shutdown. Therefore, the exemption is authorized by law.

### 3.6 No Undue Risk to Public Health and Safety

The underlying purpose of 10 CFR part 50, Appendix R, Section III.G.2 is to ensure that one of the redundant trains necessary to achieve and maintain hot shutdown conditions remains free of fire damage in the event of a fire. Based on the existing fire barriers, fire detectors, automatic and manual fire suppression equipment, fire protection requirements, and the absence of significant combustible loads and ignition sources in the fire areas associated with this exemption, the NRC staff has concluded that application of 10 CFR part 50, Appendix R, Section III.G.2 for these fire areas is not necessary to achieve the underlying purpose of this regulation.

The NRC staff has determined that the exemption to allow PBAPS the use of operator manual actions in lieu of the requirements specified in 10 CFR part 50, Appendix R, Section III.G.2 does not increase the probability or consequences of previously evaluated accidents. This determination is based on the NRC staff finding that the operator manual actions are not the sole form of protection relied upon due to the other fire protection features in place and the manual actions are considered feasible and provide safe shutdown capability following a fire. The combination of the operator manual actions, in conjunction with all of the measures and systems discussed above, results in an adequate level of protection. No new accident initiators are created by allowing use of operator manual actions in the fire areas identified in the exemption and the probability of postulated accidents is not increased. Similarly, the consequences of postulated accidents are not increased. Therefore, there is no undue risk (since risk is probability multiplied by consequences) to public health and safety.

### 3.7 Consistent With Common Defense and Security

The proposed exemption would allow PBAPS the use of specific operator manual actions in lieu of meeting the requirements specified in 10 CFR part 50, Appendix R, Section III.G.2. This change, to the operation of the plant, has no relation to security issues nor does it diminish the level of safety from

what was intended by the requirements contained in Section III.G.2. Therefore, the common defense and security is not impacted by this exemption.

### 3.8 Special Circumstances

One of the special circumstances described in 10 CFR 50.12(a)(2)(ii) is that the application of the regulation is not necessary to achieve the underlying purpose of the rule. The underlying purpose of 10 CFR Part 50, Appendix R, Section III.G.2 is to ensure that one of the redundant trains necessary to achieve and maintain hot shutdown conditions remains free of fire damage in the event of a fire. For the fire areas specified in Table 1 of this exemption, the NRC staff finds that the operator manual actions are feasible and can be reliably performed and the existing configuration described herein will ensure that a redundant train necessary to achieve and maintain safe shutdown of the plant will remain free of fire damage in the event of a fire in these fire zones. Since the underlying purpose of 10 CFR part 50, Appendix R, Section III.G is achieved, the special circumstances required by 10 CFR 50.12(a)(2)(ii) for the granting of an exemption from 10 CFR part 50, Appendix R, Section III.G.2 exist.

### 4.0 Conclusion

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), 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. Also, special circumstances are present such that application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule. Therefore, the Commission hereby grants Exelon an exemption from the requirements of Section III.G.2 of Appendix R of 10 CFR Part 50, to PBAPS Units 2 and 3 for the 25 operator manual actions specified in Table 1.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment (74 FR 5191).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 30th day of January 2009.

For the Nuclear Regulatory Commission  
**Joseph G. Giitter,**  
 Director, Division of Operating Reactor  
 Licensing, Office of Nuclear Reactor  
 Regulation.

TABLE 1—CROSS-REFERENCE BETWEEN PEACH BOTTOM FIRE PROTECTION PROGRAM, REVISION 3, TABLE A-4 AND OPERATOR MANUAL ACTIONS

Operator manual action number	Table A-4 cross reference	Purpose	Fire affected component information	Initiating fire area (FA)	Actions	Action locations	Notes
1 .....	2AP35 ....	Defeat 2A residual heat removal (RHR) pump (2AP35) trip signal generated by fire damage to Unit 3 RHR Logic.	External wiring (located in the initiating fire areas) to the Unit 3 RHR logic in panel 30C33 (located in Room (Rm) 302, FA 25).	2, 57 .....	Install U3 plug-in test switch 3-10A-J1B at Panel 30C33.	Cable Spreading Room, Rm 302, FA 25.	Note 1 Note 2
2 .....	2BS456 ..	Transfer 125 VDC Battery Charger 2BD003 from normal source (E224-T-B) to its alternate source (E234-T-B) due to fire damage.	Loss of power (due to fire damage in initiating fire areas) to 125 VDC Battery Charger 2BD003 (located in Rm 226, FA 36).	2, 4, 6S, 57.	1. Verify Breaker 52-6011 at E234-T-B is closed prior to operating switch 2BS456.  2. Operate switch 2BS456 to restore power for Battery Charger 2BD003 from an alternate power source.	1. E-23 Bus Room, Rm 263, FA 35.  2. E-42 Bus Room, Rm 226, FA 36.	Note 1 Note 4
3 .....	2DS456 ..	Transfer 125 VDC Battery Charger 2DD003 from normal source (E424-W-A) to its alternate source (E234-T-B) due to fire damage.	Loss of power (due to fire damage in initiating fire areas) to 125 VDC Battery Charger 2DD003 (located in Rm 226, FA 36).	2, 6S, 38, 57.	1. Verify Breaker 52-6022 at E234-T-B is closed prior to operating switch 2DS456.  2. Operate switch 2DS456 to restore power for Battery Charger 2DD003 from an alternate power source.	1. E-23 Bus Room, Rm 263, FA 35.  2. E-42 Bus Room, Rm 226, FA 36.	Note 1 Note 4 Note 5
4 .....	3BP35 ....	Defeat 3B RHR pump (3BP35) trip signal generated by fire damage to Unit 2 RHR logic.	External wiring (located in initiating fire areas) to the Unit 2 RHR logic in panel 20C32 (located in Rm 302, FA 25).	2, 57 .....	Install U2 plug-in test switch into test jack 2-10A-J1A at panel 20C32.	Cable Spreading Room, Rm 302, FA 25.	Note 1 Note 2
5 .....	30S546 ..	Transfer instrument power supplies from normal source (panel 30Y050) to alternate power source (panel 20Y033) due to fire damage.	Loss of power (due to fire in initiating fire area) to instrument power supply panel 30Y050 (located in Rm 302, FA 25).	13N .....	Operate key switch 30S546 to restore power to instrument panel from 20Y033.	Cable Spreading Room, Rm 302, FA 25.	
6 .....	3AS456 ..	Transfer 125 VDC Battery Charger 3AD003 from its normal power source (E134-T-B) to its alternate power source (E124-T-B) due to fire damage.	Loss of power (due to fire damage in initiating fire area) to 125 VDC Battery Charger 3AD003 (located in Rm 261, FA 32).	13N .....	1. Verify Breaker 52-5934 at E124-T-B is closed prior to operating switch 3AS456.  2. Operate switch 3AS456 to restore power for Battery Charger 3AD003 from an alternate power source.	1. E-12 Bus Room, Rm 227, FA 39.  2. E-33 Bus Room, Rm 261, FA 32.	Note 4

TABLE 1—CROSS-REFERENCE BETWEEN PEACH BOTTOM FIRE PROTECTION PROGRAM, REVISION 3, TABLE A-4 AND OPERATOR MANUAL ACTIONS—Continued

Operator manual action number	Table A-4 cross reference	Purpose	Fire affected component information	Initiating fire area (FA)	Actions	Action locations	Notes
7 .....	3CS456 ..	Transfer 125 VDC Battery Charger 3CD003 from its normal power source (E334-R-B) to its alternate power source (E124-T-B) due to fire damage.	Loss of power (due to fire damage in initiating fire areas) to 125 VDC Battery Charger 3CD003 (located in Rm 261, FA 32).	13N, 13S, 26, 57, 58.	1. Verify Breaker 52-5911 at E124-T-B is closed prior to operating switch 3CS456.  2. Operate switch 3CS456 to restore power for Battery Charger 3CD003 from an alternate power source.	1. E-12 Bus Room, Rm 227, FA 39.  2. E-33 Bus Room, Rm 261, FA 32.	Note 1 Note 3 Note 4 Note 6
8 .....	MO3-10-89A.	Manually operate MO-3-10-089A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-3-10-089A, 3A RHR Heat Exchanger High Pressure Service Water Heat Outlet (located in Rm 156, FA 2).	13N .....	1. Open breaker 52-3623 at E134-W-A.  2. Manually open MO-3-10-089A.	1. U3 RBCCW Room, Rm 162, FA 2.  2. U3 RHR Pump Room, Rm 156, FA 2.	
9 .....	MO-2486	Manually operate valve MO-2486 upon loss of electrical operating capability due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-2486, High Pressure Service Water Normal Discharge Valve (located in Rm 815, FA 54).	50, 54 .....	1. Open breaker 52-5442 at E234-D-A.  2. Manually open MO-2486.	1. E2 Diesel Generator Room, Rm 817, FA 45.  2. Cardox Room, Rm 815, FA 54.	Note 7
10 .....	MO-2486	Locally operate MO-2486 from the MCC if the fire has caused loss of remote operating capability.	Loss of power (due to fire damage in the initiating fire areas) to MO-2486, High Pressure Service Water Normal Discharge Valve (located in Rm 815, FA 54).	4, 38, 57	1. Open breaker 52-5442 at E234-D-A.  2. Open valve using contactor at MCC.	1 and 2. E2 Diesel Generator Room, Rm 817, FA 45.	Note 1
11 .....	MO-3486	Manually operate valve MO-3486 upon loss of electrical operating capability due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-3486, High Pressure Service Water Normal Discharge Valve (located in Rm 815, FA 54).	50, 54 .....	1. Open breaker 52-5441 at E234-D-A.  2. Manually open MO-3486.	1. E2 Diesel Generator Room, Rm 817, FA 45.  2. Cardox Room, Rm 815, FA 54.	Note 7

TABLE 1—CROSS-REFERENCE BETWEEN PEACH BOTTOM FIRE PROTECTION PROGRAM, REVISION 3, TABLE A-4 AND OPERATOR MANUAL ACTIONS—Continued

Operator manual action number	Table A-4 cross reference	Purpose	Fire affected component information	Initiating fire area (FA)	Actions	Action locations	Notes
12 .....	MO-3486	Locally operate MO-3486 from the motor control center (MCC) if the fire has caused loss of remote operating capability.	Loss of power (due to fire damage in the initiating fire areas) to MO-3486, High Pressure Service Water Normal Discharge Valve (located in Rm 815, FA 54).	57, 58 .....	1. Open breaker 52-5441 at E234-D-A.  2. Open valve using contactor at MCC.	1 and 2. E2 Diesel Generator Room, Rm 817, FA 45.	Note 1 Note 3
13 .....	MO2-10-034A.	Manually open valve MO-2-10-034A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-2-10-034A, RHR Loop A Full Flow Test Valve (located in Rm 1, FA 5).	4, 57 .....	1. Open breaker 52-3832 at E324-R-B.  2. Manually open MO-2-10-034A.	1. U2 Reactor Bldg, Rm 212, FA 6S.  2. U2 Torus Room, Rm 1, FA 5.	Note 1
14 .....	MO2-10-039A.	Manually open valve MO-2-10-039A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-2-10-039A, RHR Loop A Torus Header Valve (located in Rm 1, FA 5).	4, 57 .....	1. Open breaker 52-3831 at E324-R-B.  2. Manually open MO-2-10-039A.	1. U2 Reactor Bldg, Rm 212, FA 6S.  2. U2 Torus Room, Rm 1, FA 5.	Note 1
15 .....	MO3-10-034A.	Manually open valve MO-3-10-034A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-3-10-034A, RHR Loop A Full Flow Test Valve (located in Rm 37, FA 12).	13N, 26 ..	1. Open breaker 52-3832 at E334-R-B.  2. Manually open MO-3-10-034A.	1. U3 Reactor Bldg, Rm 257, FA 13S.  2. U3 Torus Room, Rm 37, FA 12.	
16 .....	MO3-10-039A.	Manually open valve MO-3-10-039A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-3-10-039A, RHR Loop A Torus Header Valve (located in Rm 37, FA 12).	13N, 26 ..	1. Open breaker 52-3831 at E334-R-B.  2. Manually open MO-3-10-039A.	1. U3 Reactor Bldg, Rm 257, FA 13S.  2. U3 Torus Room, Rm 37, FA 12.	
17 .....	MO2-10-034B.	Manually open valve MO-2-10-034B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-2-10-034B, RHR Loop B Full Flow Test Valve (located in Rm 1, FA 5).	6S .....	1. Open breaker 52-3933 at E424-W-A.  2. Manually open MO-2-10-034B.	1. U2 RBCCW Room, Rm 105, FA 2.  2. U2 Torus Room, Rm 1, FA 5.	

TABLE 1—CROSS-REFERENCE BETWEEN PEACH BOTTOM FIRE PROTECTION PROGRAM, REVISION 3, TABLE A-4 AND OPERATOR MANUAL ACTIONS—Continued

Operator manual action number	Table A-4 cross reference	Purpose	Fire affected component information	Initiating fire area (FA)	Actions	Action locations	Notes
18 .....	MO2-10-039B.	Manually open valve MO-2-10-039B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-2-10-039B, RHR Loop B Torus Header Valve, (located in Rm 1, FA 5).	6S .....	1. Open breaker 52-3942 at E424-W-A.	1. U2 RBCCW Room, Rm 105, FA 2.	
19 .....	MO2-10-89D.	Manually open valve MO-2-10-089D if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-2-10-089D, 2D RHR Heat Exchanger High Pressure Service Water Outlet Valve (located in Rm 104, FA 2).	6S .....	1. Open breaker 52-3931 at E424-W-A.	1. U2 RBCCW Room, Rm 105, FA 2.	
20 .....	MO3-10-034B.	Manually open valve MO-3-10-034B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-3-10-034B, RHR Loop B Full Flow Test Valve (located in Rm 37, FA 12).	2, 57, 58	1. Open breaker 52-3933 at E434-R-B.	1. U3 Reactor Bldg, Rm 250, FA 13N.	Note 1 Note 3
21 .....	MO3-10-039B.	Manually open valve MO-3-10-039B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire areas) to MO-3-10-039B, RHR Loop B Torus Header Valve (located in Rm 37, FA 12).	2, 57, 58	1. Open breaker 52-3942 at E434-R-B.	1. U3 Reactor Bldg, Rm 250, FA 13N.	Note 1 Note 3
22 .....	MO3-10-89D.	Manually operate MO-3-10-089D if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-3-10-089D, 3D RHR Heat Exchanger High Pressure Service Water Outlet Valve (located in Rm 159, FA 10).	58 .....	1. Open breaker 52-3931 at E434-R-B.	1. U3 Reactor Bldg, Rm 250, FA 13N.	Note 3
23 .....	MO2-10-25B.	Manually operate MO-2-10-025B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-2-10-025B, RHR Loop B In-board Discharge Valve (located in Rm 204, FA 6N).	6S .....	1. Open breaker 52-25B02 at N210025B, LPCI Swing Bus B.	1. U2 Reactor Bldg, Rm 205, FA 6N.	
					2. Manually open MO-2-10-025B.	2. U2 Reactor Bldg, Rm 204, FA 6N.	

TABLE 1—CROSS-REFERENCE BETWEEN PEACH BOTTOM FIRE PROTECTION PROGRAM, REVISION 3, TABLE A-4 AND OPERATOR MANUAL ACTIONS—Continued

Operator manual action number	Table A-4 cross reference	Purpose	Fire affected component information	Initiating fire area (FA)	Actions	Action locations	Notes
24 .....	MO3-10-25A.	Manually operate MO-3-10-025A if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-3-10-25A RHR Loop A In-board Discharge Valve (located in Rm 248, FA 13S).	13N .....	1. Open breaker 52-25A02 at N310025A, LPCI Swing Bus A.  2. Manually open valve MO-3-10-025A.	1. U3 Reactor Bldg, Rm 257, FA 13S.  2. U3 Reactor Bldg, Rm 248, FA 13S.	
25 .....	MO3-10-25B.	Manually operate MO-3-10-025B if electrical operating capability is lost due to fire damage.	Loss of power (due to fire damage in the initiating fire area) to MO-3-10-025B, RHR Loop B In-board Discharge Valve (located in Rm 249, FA 13N).	13S .....	1. Open breaker 52-25B02 at N310025B LPCI Swing Bus B.  2. Open MO-3-10-025B from MCC Contactor.	1 and 2. U3 Reactor Bldg, Rm 250, FA 13N.	

**Table Notes:**

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, but the action location, timing and outcome are the same. The original action was to reach inside the logic cabinet and physically manipulate a relay. A plug-in switch was fabricated so the operator would not have to handle an energized relay. The outcome is the same (the relay is actuated).

Note 3: Fire Area 58 was originally part of Fire Area 2 and was subsequently made a separate Fire Area.

Note 4: When the station procedures were developed, an initial step of verification of the breaker position (closed) of the alternate power source was added. Appendix R permits the assumption that equipment that is not fire affected will be in its expected position. So verification of this breaker position is not required for Appendix R compliance. Operations determined that they wanted to add a step to verify the position of the breaker as a precaution. This extra step was added to this Table since the action is performed in a different fire area than the steps associated with operating the switch. It is important to show that all actions taken by the operators are not in the same fire area where the fire is postulated.

Note 5: Fire Area 2 was omitted from the table in Revision 4. Fire Area 2 is listed in the revision 0, 1 and 2 tables. Fire Area 2 (which subsequently was split into Fire Area 2, 57 and 58) fire guide has always contained the attachment to transfer 125 VDC battery charger 2DD003 from the normal to the backup source.

Note 6: Fire Area 4 no longer credits use of this manual action.

Note 7: The action to manually open MO-2486 and MO-3486 (physically open the valve at the valve itself) is performed in the same fire area as the initiating fire area. There is 150 minutes (2.5 hours) between the start of the event and when the valve is to be opened. A fire in the Cardox Room will be extinguished and the smoke vented from the area long before the action needs to be performed. The operators will not have any delay or need Self Contained Breathing Apparatus to perform this action.

General Note: Table A-4 Revision 4 was a summary of information that was in the Peach Bottom Cable/Raceway analysis. This program deleted a "zero" that padded many component numbers, and some hyphens. The component number provided in the above table uses the correct nomenclature that is also used in the post-fire shutdown fire guides, safe shutdown calculations and plant labels.

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**NUCLEAR REGULATORY COMMISSION**

[NRC-2009-0049]

**Final Memorandum of Understanding Between the U.S. Nuclear Regulatory Commission and the State of Texas**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice.

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**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

This notice is to advise the public of the issuance of a Final Memorandum of Understanding (MOU) between the U.S. Nuclear Regulatory Commission (NRC) and the State of Texas. The MOU provides the basis for mutually agreeable procedures whereby the State of Texas may utilize the NRC Emergency Response Data System (ERDS) to receive data during an emergency at a commercial nuclear

power plant whose 10-mile Emergency Planning Zone lies within the State of Texas.

**II. Effective Date**

This MOU is effective January 23, 2009.

**III. Further Information**

Documents related to this action, including the application for amendment and supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public