

March 12, 2002

Mr. Michael P. Gallagher  
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200 Exelon Way  
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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE  
PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3

Dear Mr. Gallagher:

By letter dated July 2, 2001, Exelon Generation Company, LLC (Exelon), submitted for Nuclear Regulatory Commission (NRC) review an application, pursuant to 10 CFR Part 54, to renew the operating licenses for the Peach Bottom Atomic Power Station, Units 2 and 3. The NRC staff is reviewing the information contained in this license renewal application and has identified, in the enclosure, areas where additional information is needed to complete its review. Specifically, the enclosed request for additional information (RAI) is from Section 2.2 "Plant Level Scoping Results", Section 2.3 "Scoping and Screening Results: Mechanical", Section 2.4 "Scoping and Screening Results: Structures, and Component Supports", and Section 2.5 "Scoping and Screening Results: Electrical and Instrumentation and Controls".

Please provide a schedule by letter, or electronic mail for the submittal of your response within 30 days of the receipt of this letter. Additionally, the staff would be willing to meet with Exelon prior to the submittal of the response to provide clarification of the staff's request for additional information.

Sincerely,

*/RA/*

Raj K. Anand, Project Manager  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-277 and 50-278

Enclosure: As stated

cc w/encl: See next page

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**REQUEST FOR ADDITIONAL INFORMATION  
PEACH BOTTOM UNITS 2 AND 3**

**Structures and Components Subject to Aging Management Review (Section 2.0)**

RAI 2.0-1. The component groups identified in Tables 2.3.x, 2.4.x, and 2.5.x do not clearly identify the structures and components that are considered to be within the scope of license renewal and subject to an AMR. These tables identify components as commodity groups (i.e., castings and forgings). The staff is trying to understand how the commodity groups were developed and if the conventions are consistently applied in the application (e.g., section 3.0, page 3-3, identifies “examples” of component groups, however, items identified as piping specialities could also be made by casting and forging). To this end, please explain how the categories of component groups listed in the various tables were developed.

**Mechanical System Scoping Results (Table 2.2-1)**

RAI 2.2-1.1(a) Table 2.2-1, "Mechanical System Scoping Results," states that the systems identified below are out-of-scope, but specific components of these systems have been re-categorized to other systems for the purposes of license renewal.

- Drywell Ventilation System
  - Primary Containment Leak Test System
  - Reactor Building Ventilation System
  - Reactor Building Closed Cooling Water System
  - Reactor Water Cleanup System
  - Chilled Water System
  - Instrument Nitrogen System
  - Instrument Air System
  - Service Air System
  - Plant Equipment and Floor drain System
  - Process Sampling System
  - Torus water Cleanup system
  - Post Accident sampling System
  - Traversing In-Core Probe System
- Provide a brief description of each of these out-of-scope systems whose components are re-categorized to be in scope.
- Provide a textual description of the types of components re-categorized in each of the above listed systems.
- Provide details regarding the intended function(s) for each re-categorized component in the context of license renewal.
- State how the re-categorized components meet the criteria of 10 CFR 54.4(a)(1), (2), or (3).

- Components re-categorized to within-scope systems must be identifiable and traceable to the out-of-scope systems. Provide a method for identifying those components from out-of-scope systems within the various tables, that are within the scope of license renewal, as re-categorized to in-scope systems.

RAI 2.2-1.1(b) Table 2.2-1 states that components have been re-categorized for the purposes of license renewal to the systems identified below from out-of-scope systems. Please identify the re-categorized components in each of these systems in sufficient detail to allow these components to be identified in an unambiguous, traceable manner back to the system from which they have been re-categorized.

Reactor Recirculation System  
Primary Containment Isolation System  
Battery and Emergency Switchgear Ventilation System  
Safety-grade Instrument Gas System  
Main Steam System  
Fire Safe Shutdown System  
RHR System  
Core Spray System  
HPCI System  
RCIC System

RAI 2.2-1.2 Table 2.2-1 states that the Reactor Building Ventilation System is not included within the scope of license renewal. The comments section for this system states, "Piping and components associated with RHR, Core Spray, HPCI, and RCIC pump room cooling are included with the associated systems. Components credited for secondary containment boundary are included in secondary containment system." However, the intended function of room cooling is not identified in the system descriptions for the particular front-line systems: Section 2.3.2.5 for RHR, Section 2.3.2.1 for HPCI, Section 2.3.2.2 for Core Spray, or Section 2.3.2.4 for the RCIC system.

The staff believes that for safety-related systems (i.e., HPCI and RCIC), pump room cooling is an important safety-related function for environmental qualification, 10 CFR 50.49, which is a regulated event specifically cited by the license renewal rule in 10 CFR 54.4(a)(3). The intended function of pump room cooling is cited in UFSAR Sections 7.19, "Class 1E Equipment Environmental Qualification," pages 7.19-1 to 7.19-3, and Section 7.19.1, "Effects of Loss of Air Conditioning and Ventilation on Control Room and Equipment Room Equipment".

In particular, page 7.19-2, Rev. 17, 04/00, and page 7.19-3, Rev. 17, 04/00, of the UFSAR state that:

".....For the core spray and RHR pump rooms, loss of ventilation in one room as a result of single active failure could result in loss of function for ECCS equipment in that room... For the standby diesel-generator rooms, loss of

ventilation in one room as a result of a single active failure could result in loss of the function of the associated diesel generator due to insufficient cooling....”

In view of the above, please explain where in the LRA, the intended function of pump room cooling is addressed for the HPCI, RCIC, RHR and Core Spray systems. Please refer to (and provide if necessary) appropriate drawings, and explain why UFSAR Section 7.19 is not referenced in the LRA.

- RAI 2.2-1.3 Table 2.2-1 states in the comments field for the Drywell Ventilation System, “Instrumentation credited for Fire Safe Shutdown is included in the Fire Safe Shutdown System....” Table 2.2-3 states that the Fire Safe Shutdown System is in the scope of license renewal and that in-scope components from the out-of-scope Substations & Transformers and 13 Kv systems were re-categorized to the Fire Safe Shutdown System. However, the LRA does not contain any further description or reference to the Fire Safe Shutdown System. Please clarify whether a separate system exists for the fire safe shutdown function, and what components in this system are subject to an AMR.

#### **Containment Atmosphere Control and Dilution System (Section 2.3.2.6)**

- RAI 2.3.2.6-1. 10 CFR 54.21 requires the applicant to identify those structures and components that are subject to an aging management review. The following components and housings are shown on drawing LR-M-372, as being within the scope of license renewal:

- Atmospheric vaporizer 60GC-1", sheet 1, location G4.
- Pressure build coil, sheet 1, location G4.
- Numerous fittings, increasers and reducers.
- Rupture disk, sheet 1, location G4.
- Numerous flow elements.
- Numerous temperature elements.

However, Table 2.3.2-6 does not identify these components as subject to an AMR. Please provide the basis for the exclusion of these components from an AMR.

- RAI 2.3.2.6-2. Section 2.3.2.6, pages 2-50 and 2-51, lists the intended functions of the CAD and CAC system as: controlling primary containment pressure, providing a nitrogen source for safety-grade instrument gas, and monitoring the concentration of combustible gas inside primary containment. However, primary containment inerting is also an important safety-related function. The CAD purge mode is required to meet the Technical Specification requirement that the primary containment be purged of air with nitrogen until the atmosphere contains less than four (4) percent oxygen. Furthermore, the UFSAR reads: “Reference 12 [to the PBAPS UFSAR], states that although the [CAD] system is no longer assumed to be the primary means of combustible gas control, the system will be maintained as originally installed.” In light of this UFSAR quotation, the LRA does not provide the staff reasonable assurance that it is acceptable to exclude

the CAD system's primary containment inerting function from being classified as an intended function, considering that the CAD system is to be "maintained as originally installed." Please provide the basis for excluding the primary containment inerting intended function of the CAD purge mode from the scope of license renewal, considering the staff's discussion.

RAI 2.3.2.6-3. The applicant should identify the intended function of in-scope components subject to an aging management review. Table 2.3.2-6 lists pressure boundary as the only intended function of the H2 and O2 detection chambers, though these components have a combustible gas monitoring intended function for the CAC and CAD system. These components are shown on drawing LR-M-372, sheets 3 and 4 (locations E3, E4, E6, E7), as being in the scope of license renewal. Please provide the basis for not identifying combustible gas monitoring as an intended function.

### **Standby Gas Treatment System (2.3.2.7)**

RAI 2.3.2.7-1(a) LRA Table 2.3.2-7 does not identify the components and their housings listed below, although they support the safety related function of the standby gas treatment system (SGTS) to conform with the guidelines of 10 CFR 100 radioactive release.

These components, including their housings, are shown on drawing LR-M-397, sheet 1, as being in the scope of license renewal, but are not listed in Table 2.3.2-7 of the LRA. Provide justification for the exclusion of these components and their housings from the scope of license renewal and not subject to an AMR.

Housings and components excluded are:

- Demisters OAV347 (Train A) location F7 and OBV347 (Train B), location C7.
- Heating coils OAE065 (Train A), location F7 and OBE065 (Train B), location C7.
- Prefilters OAF034 (Train A), location F6 and OBF034 (Train B), location C6.
- High efficiency particulate air (HEPA) filters OAF035 (Train A), location F6 and OBF035 (Train B), location C6.
- Charcoal filters, OAF036 (Train A), location F6, and OBF036 (Train B), location C6.
- HEPA filters OAF037 (Train A), location F6 and OBF037 (Train B), location C6.

- Fire spray nozzles shown at locations F6 (Train A) and C6 (Train B).

If the filter media for the components identified above were excluded on the basis that these media components are routinely replaced (consumables), describe the plant-specific monitoring program and the specific performance standards and criteria for periodic replacement.

RAI 2.3.2.7-1(b)

LRA Table 2.3.2-7 does not identify the drywell purge supply and exhaust filtration system components and their housings listed below, although they support the safety related exhaust filtration function through the standby gas treatment system (SGTS) to conform with the guidelines of 10 CFR 100 radioactive release.

These components including their housings are shown on drawing LR-M-391, sheets 1 and 2, as being in the scope of license renewal, but are not listed in Table 2.3.2-7 of the LRA. Provide justification for the exclusion of these components and their housings from the scope of license renewal and not subject to an AMR.

Housings and components excluded are:

LRA Drawing LR-M-391, Sheet 1, Primary Containment isolation and Control (PB APS Unit 2 and Common)

- Piping (or ductwork) and valve (or damper) housings for AO-20452 through AO-20470 at locations F7, E7, D7&D8, F3&F4, E2&E3, D3, C4, and B4.
- Piping (or ductwork) at locations between B6 through E6.
- Instrumentation taps at locations F3, F7, E2, E7, D3, D7 (two), and B6

LRA Drawing LR-M-391, Sheet 2, Primary Containment isolation and Control (PB APS Unit 3)

- Piping (or ductwork) and valve (or damper) housings for AO-30452 through AO-30470 at locations F7, E7, D7&D8, F3&F4, E2&E3, D3, C4, and B4.
- Piping (or ductwork) at locations between B6 through E6.
- Instrumentation taps at locations F3, F7, E2, E7, D3, D7 (two), and B6

RAI 2.3.2.7-1(c)

Clarify whether the housings for radiation detectors 430A/B/C/D and 432A/B/C/D at locations E3&E4 and F4&F5 on drawing LR-M-391, sheets

1 and 2, Primary Containment isolation and Control (PB APS Units 2 and 3) are within the scope of license renewal and subject to an AMR.

### **Secondary Containment System (Section 2.3.2.8)**

RAI 2.3.2.8-1. The applicant should identify those structures and components subject to an aging management review. Table 2.3.2-8 does not list damper housings (numerous locations) and test connections (locations E2, E7, D3 and D8) although these components are shown on drawing LR-M-391, sheets 1 and 2, as being in the scope of license renewal. Please provide the basis for the LRA's exclusion of these components from the scope of license renewal and the AMR screening process.

RAI 2.3.2.8-2. The staff believes that the secondary containment penetrations should be in the scope of license renewal and subject to an AMR. The LRA section for the secondary containment system states that secondary containment penetrations "are considered as part of the structure." However, Table 2.4-2, which lists components of the Reactor Building Structure which are within the scope of license renewal and subject to an AMR, does not list secondary containment penetrations, nor could justification for their exclusion be found. For this reason, the staff does not have reasonable assurance that the secondary containment penetrations have been properly handled in the LRA. Please provide the LRA section and the AMR table entry in which the secondary containment penetrations are included, or justify their exclusion.

### **Fuel Pool Cooling and Cleanup System (Section 2.3.3.2)**

RAI 2.3.3.2-1. On drawing LR-M-363 sheets 1 and 2, a spool piece (location E2), reducers and increasers (location F2) are shown as being within the scope of license renewal. However, the spool piece, increasers and reducers are not specifically listed in Table 2.3.3-2 on page 2-57 of the LRA. The staff believes that the spool piece, increasers and reducers should be in the scope of license renewal and subject to an AMR. Please indicate whether these piping components are included in the scope of license renewal and subject to an AMR by adding them to Table 2.3.3-2, or provide a justification for their exclusion.

RAI 2.3.3.2-2. On drawing LR-M-363 sheets 1 and 2, in the fuel storage pool, there is an unidentified component indicated by a circle at location F4. The staff believes that this component may perform one or more intended functions, such as pressure boundary, which justify its inclusion within the scope of license renewal. However, the symbol used to identify this component is not identified on the legend (drawing LR-M-300). For this reason, the staff does not have reasonable assurance that this component has been listed in Table 2.3.3-2, or elsewhere in the LRA. Please identify this component and indicate where in the LRA it is included within the scope of license renewal and subject to an AMR or provide a justification for its exclusion.

RAI 2.3.3.2-3. In Table 2.3.3-2 on page 2-57 of the LRA, a restricting orifice is listed as a component requiring an AMR. However, pressure boundary is the only intended function listed for this component. The staff believes that flow restriction is also in intended function of this component. Please clarify whether flow restriction should also be an intended function of this component.

### **High Pressure Service Water (Section 2.3.3.5)**

RAI 2.3.3.5-1. According to Section 10.7.4 of the UFSAR, one of the functions of the high pressure service water system is to inhibit leakage of radioactive material from the RHR system to the environment. The staff believes that the function of the high pressure service water system to inhibit leakage of radioactive material from the RHR system to the environment should be listed in the LRA. Please provide the basis for the exclusion of this function.

RAI 2.3.3.5-2. Section 10.7.5 of the UFSAR states that under abnormal operating conditions RHR pressure could exceed high pressure service water system pressure. An RHR heat exchanger leak under these abnormal conditions would result in radioactive RHR water migrating into the high pressure service water system and into the river. To limit the release of radioactive water to the river from this potential release path, signals from the radiation monitors in the system which sample the high pressure service water system upstream and downstream of the RHR heat exchangers initiate an alarm in the control room at a predetermined radiation level.

The HPSW system radiation monitors can be isolated by closing valves, e.g. valve 63H23452A shown on drawing LR-M-315, sheet 1 at location C8. This drawing shows that the in-scope instrument tubing extends only to the valves and does not include the monitoring system itself or the tubing beyond the isolation valves. 10 CFR 54.4(a)(1)(iii) requires that safety-related SSCs relied upon to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the 10 CFR 100 guidelines be within the scope of license renewal. Since radiation monitoring is an essential component of the function to inhibit leakage of radioactive material from the RHRS to the environment, it appears that the radiation monitoring instruments and the tubing are in-scope. In addition, the valves in the tubing to the radiation monitors appear to be normally open, so the tubing and radiation monitors also serve a pressure boundary function. Provide justification why the radiation monitors and the tubing which delivers fluid to the monitors are not in scope.

### **Emergency Service Water (Section 2.3.3.6)**

RAI 2.3.3.6-1. According to NUREG/CR-4550, Vol. 4, Rev. 1, Part 3 (page 4.3-5), a LOCA in the Normal Service Water (NSW) system, where the piping interfaces with the Emergency Service Water (ESW) system would cause the ESW to feed the break instead of cooling certain safety system loads. That is, a rupture of the NSW piping in a post accident condition could cause the ESW (an in-scope system) to fail to perform its safety function. The drawings for the ESW system

(LR-M-315) do not indicate the boundary between the ESW and NSW systems, so it cannot be determined whether the section of piping referred to in NUREG/CR-4550 has been re-categorized to the ESW system. Please clarify the location of the boundary between the NSW system and the ESW system. If a section of NSW piping has been re-categorized to the ESW system, this should be noted in Table 2.2-1.

### **Fire Protection System (Section 2.3.3.7)**

RAI 2.3.3.7-1. The fire protection licensing bases for the plant are outlined in the PBAPS Fire Protection Program document and includes responses to APCS Branch Technical Position 9.5-1, Appendix A. The NRC issued an SER with four supplements to address the plant commitments in response to the BTP. The retroactivity of 10 CFR 50.48, Appendix R requirements applied to PBAPS was determined based on these SERs.

Section 2.1.2.1 of the Scoping and Screening Methodology identified SSCs relied upon to demonstrate compliance with 10 CFR 50.48 as being included in the scope, but does not explicitly include commitments made to the criteria contained in the BTP and its related SERs. Verify that the fire protection criteria contained in the BTP and related SERs were considered in the scoping and screening process.

RAI 2.3.3.7-2. The provision of fire detection and alarm systems and components is required both by Branch Technical Position APCS 9.5-1, Appendix A and by 10 CFR 50, Appendix R.

The PBAPS Unit 2 and 3 Fire Protection Program document in Item 46, page 3.1-48 indicates that fire detection and alarm systems and components have been installed in the plant in accordance with regulatory requirements. Paragraph 2.3.3.7, Fire Protection System, System Description, identifies heat and smoke detection installed in all areas containing safety related equipment, except as exempted by the NRC. Table 2.2-3, Electrical and I&C System Scoping Results does not reference Fire Detection and Alarm. Based on these criteria, the staff believes that the Fire Detection and Alarm System should be in the scope of license renewal and subject to an AMR. Please include this system or provide the justification for its exclusion.

RAI 2.3.3.7-3. Section 2.4 identifies the fire resistance function of reinforced concrete walls, slabs, columns and beams, and reinforced concrete block walls, but not for any structural steel columns or beams. Table 3.5-14, "Aging Management Review Results for Hazard Barriers and Elastomers," identifies cementitious fire proofing (spray-on fire proofing) as a material of construction associated with fire wraps. The staff believes that cementitious fire proofing may have been applied to structural steel members serving as part of fire barriers, and if so, it should be included within the scope of license renewal and subject to an AMR. Identify, for each structure in LRA Section 2.4, if fire resistive coatings have been applied to structural steel members serving as part of fire barriers and if they are within the

scope of license renewal and subject to an AMR. If fire resistive coatings are present but not in scope and subject to an AMR, please provide a justification for their exclusion.

RAI 2.3.3.7-4. LRA Section B.2.9, "Fire Protection Activities," refers to functionally testing a representative sample of sprinkler heads for flow blockage and verification of proper operation. NFPA-25, "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," in Section 2-3, "Testing" (and formerly in NFPA 13 when these systems were installed), requires a sample of not less than four sprinklers or one percent (whichever is greater) of the number of sprinklers per individual sprinkler sample. The standard further requires the testing be done by a recognized testing laboratory, and that the testing be repeated at 10-year intervals. The testing is intended to verify the operability (operating temperature) of the fusible element as well as the ability of the orifice to open upon the fusing of the head. The standard requires that if one head fails, all the heads represented by that sample shall be replaced.

NFPA-25 also requires that the testing of fast response heads which have been in service for 20 years. Appendix B.2.9 only references NFPA-24, "Standard for Outside Protection," 1970 edition. Please verify that no fast-response sprinklers have been installed in fire protection systems within the scope of the application, or provide a discussion of how the requirements of NFPA-25 will be addressed.

RAI 2.3.3.7-5. Reference is made in the Fire Protection Program document to some heat detectors as being non-restorable. NFPA-72, "National Fire Alarm Code," requires testing of a sample of non-restorable heat detectors after 15 years of service (see NFPA-72, Table 7-2.2 item 13.3.) No reference is made to heat detector testing in B-2.9. If non-restorable heat detectors are installed in areas within the scope of this application, identify where they are installed and how they are to be incorporated in the aging management plan.

RAI 2.3.3.7-6. UFSAR Section 5.2 "Primary Containment", sub-section 5.2.2, "Safety Design Basis", item 13 on page 5.2-2 (Rev. 16 - 04/99) states:

"The primary containment is provided with a hardened (pipe) vent to be used in the event of a long term loss of the RHR cooling of the Torus water. The scenario is beyond the current licensing basis of the plant and is called the TW Sequence as defined by the BWR Owner's Group. The vent is a direct path from primary containment to the atmosphere."

Table 7.2-2a, "Fire Issue Resolution", identifies containment venting as required for fire area response in multiple areas. Specifically, venting is identified for Fire Area 1B (Unit 2); 6S (Unit 2 and Unit 3); 12B (Unit 3), 13S (Unit 3); and 39 (Unit 2 and Unit 3). Provide the bases for excluding components of the torus hardened vent from the scope of license renewal even though the containment venting intended function is cited for Appendix R post-fire safe shutdown for fires in the above-identified fire areas at PBAPS.

RAI 2.3.3.7-7. Table 2.3.3-7 lists the components which are subject to an AMR. Some components of the carbon dioxide suppression system are not included in this table, such as carbon dioxide discharge nozzles and discharge piping. The staff believes that these components are passive and long-lived and therefore subject to an AMR. These components are not pressure boundaries but are subject to a variety of internal and external environments. Include these components in the scope of the license renewal application or provide the technical justification for their exclusion.

### **Control Room Ventilation System (Section 2.3.3.8)**

RAI 2.3.3.8-1 The staff believes that the areas that constitute the main control room envelope (MCRE) perform intended functions such as cooling and filtration (in order to maintain the control room habitability (CRH) and meet Appendix A to 10 CFR 50, General Design Criteria (GDC) 19). In addition, the staff does not believe that the boundary for the MCRE has been adequately delineated. Verify that all control room ventilation system (CRVS) components (including housings of air handling units and fan coil units with their associated ductwork, housings of fire damper and control valves, air intake, and housings of exhaust fans with purge ductwork) inside the MCRE, which are relied on to perform the safety related cooling/ventilation intended functions are identified to be within the scope of license renewal and subject to an AMR on drawing LR-M-384 and in Table 2.3.3.8 of the application. If a component is not within the scope and subject to an AMR, provide justification for its exclusion.

RAI 2.3.3.8-2. LRA Table 2.3.3-8 does not identify the components and their housings listed below, although these components, including their housings, support the intended function of the CRVS to comply with the requirements of the Appendix A to 10 CFR 50, GDC 19. These components are shown on drawing LR-M-384, sheet 1, as being within the scope of license renewal, but are not listed in Table 2.3.3-8 of the LRA. Provide a justification for the exclusion of these components and their housings from being subject to an AMR.

Housings and components excluded are:

- Reheat coil 00E072, drawing LR-M-384, sheet 3, location H2.
- Thermowell for temperature transmitter TT00174, drawing LR-M-384, sheet 3, location H2.
- Louver, drawing LR-M-384, sheet 1, location D8.
- Preheat coil 00E068, sheet 1, location D7.
- High efficiency particulate air (HEPA) filters OAF041, drawing LR-M-384, sheet 1, location G6 and OBF041, location F6.

- HEPA filters OAF050, drawing LR-M-384, sheet 1, location G5 and OBF050, location F5.

If the filter media for the components identified above were excluded on the basis that these media components are routinely replaced (consumables), describe the plant-specific monitoring program and the specific performance standards and criteria for periodic replacement.

RAI 2.3.3.8-3. LRA Table 2.3.3-8 does not identify test connections shown on drawing LR-M-384, sheet 1, locations D1 [total three (3)], F1 [total three (3)], F5 [total three (2)], F6 [total two (2)], G2 [total one (1)], G4 [total two(2)], D2 [total one (1)], D3 [total one (1)], D5 [total three (3)], and D6 [total three (3)]. Provide justification for the exclusion of these test connections from Table 2.3.3-8 of the LRA to indicate that these are not subject to an AMR.

RAI 2.3.3.8-4. Clarify whether sealant materials at Peach Bottom APS Units 2 and 3 used to maintain the MCRE at positive pressure with respect to the adjacent areas in order to prevent the unfiltered inleakages inside MCRE, are included in the scope of license renewal and subject to an AMR, and if so, provide the relevant information to complete Table 2.3.3.8 of the LRA. If the sealants are not considered subject to an AMR, provide justification for their exclusion.

RAI 2.3.3.8-5. Appendix A to 10 CFR 50, GDC 19 requires cooling and protection against radiation and toxic gas in order to achieve and maintain control room envelope habitability during and after an accident. Clarify whether the following main control room cooling system components and their associated housings are within the scope of license renewal and subject to an AMR in order to provide a safety-related cooling function.

Drawing LR-M-384, sheet 2

- Supply fans, OAV028 at location F6, and OABV028 at location C5.
- Cooling coil, OAE069 at location F5, and OBEV069 at location C5.
- Supply roll filter, OOF038 at location E3.
- Bag filter, OOF057 at location E4.
- Prefilter coil, OOE110 at location F2.
- Louver at location F1.
- Ductwork, dampers, and instrumentation tubings and valves.

- Return air fans, OAV027 at location C7, and OBV029 at location A7.
- Closed cooling control room ventilation, fan, OOV326 at location C4.
- Filter, OOF327 at location C3
- Control room ventilation reheat coil, OOE072 at location H2.
- Balance damper at locations F7 and G7.
- Control room toilet exhaust fan, OOV033 at location G8
- Ductwork, dampers, and instrumentation tubings and valves.

If components and their associated housings identified above were excluded from the scope of license renewal and not subject to an AMR, provide justification for their exclusion.

#### **Battery and Emergency Switchgear Ventilation System (Section 2.3.3.9)**

RAI 2.3.3.9-1. LRA Table 2.3.3-9 does not list the heating coils and its housings OAE073 and OBE073 as being subject to an AMR, although these components are shown on drawing LR-M-399, sheet 1, locations F5 and C5, as being within the scope of license renewal. These components provide a passive boundary function for the Battery and Emergency Switchgear Ventilation System. Provide justification for the exclusion of the above components from Table 2.3.3-9 of the LRA.

RAI 2.3.3.9-2. The system description for the Battery and Emergency Switchgear Ventilation System in LRA Section 2.3.3.9 states that one of the two battery room exhaust fans discharge air from the battery rooms at the radwaste building roof. However, drawing LR-M-399, sheet 4, location G4, shows that the exhaust from the battery room fans is discharged from the control room roof. If the exhaust air from the battery room exits from the radwaste building roof as stated, then the radwaste exhaust vent should be identified on drawing LR-M-399, sheet 4 location B3, as being within the scope of license renewal and subject to an AMR. Clarify the above discrepancy.

#### **Diesel Generator Building Ventilation System (Section 2.3.3.10)**

RAI 2.3.3.10-1. LRA Table 2.3.3-10 does not list the housings of the unit heaters identified in drawings OAE097 @ F5, OBE097 @ F4, OCE097 @ E5, ODE097 @ E4, OEE097 @ E5, OFE097 @ E4, OGE097 @ D5, OHE097 @ D4, OAE140 @ G5, and OBE140 @ F5.

If the components and their associated housings identified above were excluded from the scope of license renewal and not subject to an AMR, provide justification for their exclusion.

**Pump Structure Ventilation System (Section 2.3.3.11)**

RAI 2.3.3.11-1. LRA Section 2.3.3.11, page 2-76, identifies both Emergency Service Water (ESW) pumps and High Pressure Service Water (HPSW) pumps as being ventilated and cooled by the Pump Structure Ventilation System. Similarly, UFSAR Section 10.14.3.3, page 10.14-2, Rev. 17, 04/00, describes the ESW/HPSW compartment as housing the HPSW pumps, ESW pumps, fire pumps and service water screen wash pumps.

However drawing LR-M-392, sheet 1, at locations C4 and C5, shows four pump structure compartments identified as being in the scope of license renewal. Two of these compartments are labeled "Emerg. Water Pumps", for units 2 and 3. Each compartment is shown as containing two intake and two exhaust fans, plus a unit heater. Please clarify whether these are the compartments described in the LRA and the UFSAR as housing the HPSW pumps, ESW pumps, fire pumps and service water screen wash pumps. The other two compartments are identified as "Circ. Water Pumps". Please identify all of the components contained in these four compartments that are within the scope of license renewal and confirm whether they are cooled by the Pump Structure Ventilation System.

RAI 2.3.3.11-2. LRA Table 2.3.3-11 does not list the housings of the unit heaters shown on drawing LR-M-392, sheet 1, one at location C3, two at location C4, two at location C5, and one at location C6.

Also LRA Table 2.3.3-11 does not list housings of exhausters shown on drawing LR-M-392, sheet 1, 0AV062 at location D6, 0BV062 at location D5, 0CV062 at location D5, 0DV062 at location D3, 0EV062 at location D3, and 0FV062 at location D4.

If these components and their associated housings identified above were excluded from the scope of license renewal and not subject to an AMR, provide justification for their exclusion.

**Safety Grade Instrument Gas (Section 2.3.3.12)**

RAI 2.3.3.12-1. UFSAR Section 10.17.5 (page 10.17-5), it states that, "The containment atmosphere dilution system purge and vent valves are supplied with separate safety grade pneumatic supplies to the inflatable seals to maintain their leaktight condition." Additionally, the UFSAR states that one of the suppression chamber-to-secondary containment vacuum

breaker air-operated valves (one on each unit) is supplied with an inflatable valve seal. On drawing LR-M-367 (locations A-7 and E-2), the inflatable valve seals are not shown to be within the scope of license renewal. Please clarify why these valve seals are not within the scope of license renewal.

- RAI 2.3.3.12-2. On drawing LR-M-367, "Containment Atmospheric Control System," piping components such as reducers and increasers (various locations) are shown as within the scope of license renewal. However, Table 2.3.3-12 on page 2-78 of the LRA does not specifically list these components. Please clarify if these piping components are included in the category of "pipe." If not, please explain why these components are not subject to an AMR.

#### **Backup Instrument Nitrogen to ADS System (Section 2.3.3.13)**

- RAI 2.3.3.13-1. On drawing LR-M-333 sheets 1 and 2, piping components such as weld caps (location A3), reducers and increasers (various locations) are shown to be within the scope of license renewal. However, these piping components are not listed in Table 2.3.3-13 as requiring an AMR. Please clarify if these components are included within the component group "pipe."

- RAI 2.3.3.13-2. In Section 2.3.3.13 of the LRA (page 2-79), it states that the backup nitrogen supply to the ADS system consists of a split ring header with a seismic Category 1 bottle rack, etc. The bottle rack is not mentioned in sections 4.4 or 10.17 of the PBAPS UFSAR, nor is it shown on drawings LR-M-333 and LR-M-351. Additionally, the bottle rack is not listed in Table 2.3.3-13 as requiring an AMR. This component was not found by searching other possible sections of the LRA. Please identify the LRA reference where this component is listed as being subject to an AMR, or explain why the bottle rack does not require an AMR.

- RAI 2.3.3.13-3. On page 4.4-8 of the PBAPS UFSAR it states, "Containment isolation is provided for safety grade pneumatic supply lines into containment by use of check valves and other automatic valves outside containment." In Table 2.3.3-13, although valve bodies are listed, containment isolation is not listed as a component function. Please clarify whether this function should be included in the table.

#### **Emergency Cooling Water System (Section 2.3.3.14)**

- RAI 2.3.3.14-1. On drawing LR-M-330, sheet 1, two insulating fittings (location E3), a temporary strainer (location E6), and numerous reducers, increasers and

flanges are shown as being within the scope of license renewal. The staff believes that the fittings, strainers, flanges, increasers and reducers should be subject to an AMR. However, these components are not listed in Table 2.3.3-14 of the LRA. Please indicate if these components are subject to an AMR by adding them to Table 2.3.3-14, or provide a justification for their exclusion.

- RAI 2.3.3.14-2. On drawing LR-M-330, sheet 1, the discharge pond (location A7/A8) is shown as being within the scope of license renewal. However, the discharge pond is not shown as being within the scope of license renewal on Site Plan LR-S-001, or in Table 2.2-2. Please clarify the status of the discharge pond. If the discharge pond is not included in the scope of license renewal and subject to an AMR, provide the justification for its exclusion.

#### **Condensate Storage System (Section 2.3.3.15)**

- RAI 2.3.3.15-1. The staff believes that the condensate storage system has a safety-related current licensing basis function to provide a backup source of water to the control rod drive system. UFSAR Section 3.4.5 states: "In the event that the flow from the condensate system is interrupted at any time, the condensate storage tank provides a backup source to ensure CRDS operability without operator action being required." Please provide the basis why this intended function is not included in Section 2.3.3.15 of the LRA.
- RAI 2.3.3.15-2. As stated in RAI 2.3.3.15-1, the staff believes that the condensate storage system has a safety-related function. Therefore, please provide the basis for the pipes that connect to the condensate storage tank at a low elevation on P&ID drawing LR-M-309 being considered out-of-scope. In addition, please provide the basis for the freeze protection piping (from the Auxiliary Heating/Steam Supply System) which support the function of the condensate storage tank being considered out-of-scope.

#### **Emergency Diesel Generator (Section 2.3.3.16)**

- RAI 2.3.3.16-1. Several Emergency Diesel Generator components are identified on the LR drawings as being within the scope of license renewal, but are not identified as being subject to an AMR. The staff believes that these components should be subject to an AMR. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to complete Table 2.3.3-16. If a component is not subject to an AMR, provide a justification for its exclusion:

On P&ID LR-M-377 sheet 3 (Lube Oil System)

- The turbo chargers (location E6)
- Lube oil standby heater (casing) (location C7), and
- Lube oil filter (housing) (location E3)

On P&ID LR-M-377 sheet 4 (Diesel Fuel Oil System)

- Reducers and sample connections (example location B7)
- Spare weld caps (example location B7), and
- Filters (housing) (example location D3)

On P&ID LR-M-377 sheet 5 (Combustion Air Intake/Exhaust System)

- Diesel generator crank case (location D6)

RAI 2.3.3.16-2. Please clarify if the housing of the blower air filter, shown on drawing LR-M-377 sheet 5 (location F8), and the scavenging air blower, shown at location E8 serve as pressure boundaries. If so, please explain why these components have not been included in Table 2.3.3-16. If these components are not subject to an AMR, provide the justification for their exclusion.

### **Suppression Pool Temperature Monitoring System (Section 2.3.3.17)**

RAI 2.3.3.17-1. In Section 2.3.3.17 of the LRA, the applicant states that the suppression pool temperature monitoring system boundaries are identified on license renewal drawing LR-M-361. However, the staff is unable to find the components of this system on the drawing, and nor do the notes accompanying this drawing (note 1, at location B1) list this system as being shown on this drawing. Please provide a correct drawing reference that identifies the components of this system.

### **Cranes and Hoists (Section 2.3.3.18)**

RAI 2.3.3.18-1. In Section 2.3.3.18, the applicant provides a brief description of the cranes and hoists. Table 2.3.3-18 contains (a) the circulating water pump structure crane, (b) reactor building overhead bridge cranes, and (c) other cranes and hoists. The term "other cranes and hoists" is very general and not amenable to a review. The UFSAR contains references to several cranes and hoists such as the Turbine Building cranes, Emergency Diesel Generator cranes, Overhead Bridge cranes, Gantry cranes, and lifting devices/structures like lifting beams and refueling platform frame mounted or monorail hoist. The staff is unable to determine with reasonable assurance whether the applicant has

adequately identified the cranes and hoists that are within the scope of license renewal and subject to an AMR. Please provide a list of all cranes and hoists that are in scope and identify those subject to an AMR.

RAI 2.3.3.18-2. Table 2.3.3-18 lists several components within the scope of license renewal, however, the staff believes the table to be incomplete. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to complete Table 2.3.3-18. If a component is not subject to an AMR, provide a justification for its exclusion:

- Columns
- Baseplates and anchors for attachment to structures
- Structural crane components such as bridge girders, columns, trolley rails, baseplates and anchors for attachment to structures

#### **Main Steam System (Section 2.3.4.1)**

RAI 2.3.4.1-1. Drawing LR-M-304, "Turbine and Extraction Steam," is referenced in Section 2.3.4.1 as an LR boundary diagram; however, on LR-M-300 sheet 1 it is not listed as being provided. Please provide the subject drawing, or explain why it is not necessary for review.

RAI 2.3.4.1-2. As indicated in Section 2.3.4 of the LRA (page 2-94), and in PBAPS UFSAR Section 14.9, one of the intended functions of the main steam system is post accident containment, holdup and plate out of the MSIV bypass leakage. However, this intended function is not included in Table 2.3.4-1. Please explain why this function has not been included in the table.

RAI 2.3.4.1-3. On drawing LR-M-303 (locations C8, E8, F8), thermowells (without temperature elements) are shown to be within the scope of license renewal, but are not specifically listed as being subject to an AMR in Table 2.3.4-1. The staff believes that these components should be in the scope of license renewal and subject to an AMR. The same is true of thermowells on drawing LR-M-351 sheets 1 and 3 (location G2). Please indicate if these components are subject to an AMR by adding them to Table 2.3.4-1, or provide a justification for their exclusion.

RAI 2.3.4.1-4. On drawing LR-M-351 (locations C3 and G4), an expansion joint is shown to be within the scope of license renewal. A review of Section 2.3.2.3, "Primary Containment Isolation System," of the LRA does not indicate that this component has been included for an AMR. Please clarify the intended function of this expansion joint, and whether it requires an AMR. If so, please include it in an appropriate table in the LRA.

- RAI 2.3.4.1-5. In Section 2.3.4.1, containment isolation is listed as an intended function, but this function is not listed in Table 2.3.4-1. The containment isolation function is said to be provided by the Primary Containment Isolation System. Please clarify if the containment isolation function should be included as an intended function for various components listed in Table 2.3.4-1.
- RAI 2.3.4.1-6. License renewal boundary drawing LR-M-303, sheets 1 and 3, indicate that the turbine stop valves are not within the scope of license renewal for Peach Bottom, Units 2 and 3 respectively. On the drawing, the turbine stop valves form the boundary between the piping that is within the scope of license renewal and the piping that is out of scope. If the valve body were to fail, it appears that the piping within the scope of the Rule would be unable to perform its intended function. Please provide the basis for the exclusion of these valves from the scope of license renewal.

### **Feedwater System (Section 2.3.4.3)**

- RAI 2.3.4.3-1. Section 2.3.4.3 of the LRA provides a listing of the intended functions within the scope of license renewal. On page 2-98 of the LRA, one of the functions listed is containment isolation. However, Table 2.3.4-3 does not list this intended function. Please include this function in the table, or explain why it should not be included.
- RAI 2.3.4.3-2. On drawing LR-M-308, reducers and increasers are shown to be within the scope of license renewal. However, these piping components are not specifically listed in Table 2.3.4-3 as requiring an AMR. The staff believes that these components should be subject to an AMR. Please indicate if these components are subject to an AMR by adding them to Table 2.3.4-3, or provide a justification for their exclusion.
- RAI 2.3.4.3-3. Drawing LR-M-351, sheets 1 through 4, show the tie in to the feedwater system from the high pressure coolant injection system. Example location F8 shows an expansion joint which is shown to be within the scope of license renewal. A review of Section 2.3.2.3, "Primary Containment Isolation System," of the LRA does not indicate that this component is subject to an AMR. Please clarify the intended function of this expansion joint, and whether it requires an AMR. If so, please include it in an appropriate table in the LRA.
- RAI 2.3.4.3-4. On drawing LR-M-308 sheets 1 and 3 (locations B7, E7, and G7), a flow element is shown. A flow element is listed in Table 2.3.4-3 with an intended function of pressure boundary. Please clarify whether "throttle" should be included as an intended function.

### **Containment Structure (Section 2.4.1)**

- RAI 2.4.1-1. The LRA lists three intended functions of the primary containment structure within the scope of license renewal: 1) to provide an essentially leaktight fission

product barrier, 2) to support pressure suppression and 3) to provide physical support for safety-related and non-safety-related systems and equipment during normal, and abnormal loading conditions. However, the staff believes that the containment also performs the intended functions of protecting safety-related equipment from missiles, high energy line breaks, fires, and environmental hazards. Please add these intended functions to the LRA or justify their omission.

- RAI 2.4.1-2. Section 2.4.1 of the LRA states that the drywell is a steel vessel in the shape of a light bulb and is enclosed in reinforced concrete for shielding purposes. Table 2.4-1 of the LRA lists reinforced concrete foundation and floor slab that function as radiation shielding. However, the reinforced concrete around the drywell is not included. Clarify why the reinforced concrete around the drywell and part of the containment structure is omitted from the scope of license renewal and not subject to an AMR.

#### **Reactor Building Structure (Section 2.4.2)**

- RAI 2.4.2-1. Section 5.2.3.2, "Drywell," of the UFSAR (page 5.2-5) states "shielding over the top of the drywell is provided at the refueling floor by a removable, segmented, reinforced concrete shield plug." Table 2.4-1 of the LRA lists a steel drywell head subject to an AMR, but the concrete shield plug is not included. Table 2.4-2 of the LRA lists reinforced concrete walls, slabs, columns, beams and foundation as the components subject to an AMR. Explain why the drywell shield plug (as addressed in the UFSAR) should not be within the scope of license renewal and subject to an AMR.

#### **Radwaste Building Structure (Section 2.4.3)**

- RAI 2.4.3-1 Section 2.4.3 of the LRA, states that the west wall of the radwaste building and reactor auxiliary bay consists of concrete and metal siding for its full length. However, metal siding is not explicitly mentioned under structural steel in Table 2.4-3. The staff noted that metal siding is explicitly mentioned in reviews of other structures. Specific examples include the reactor building structure, where metal siding is listed in Table 2.4-2 as used for fission product barrier and station blackout structure, where metal siding is listed in Table 2.4-6 as used for shelter and protection and/or radiation shielding. Please justify the omission of metal siding and its intended function from Table 2.4-3.

#### **Turbine Building and Main Control Room Complex (Section 2.4.4)**

- RAI 2.4.4-1 Section 2.4.4 of the LRA describes the turbine building structure as follows, "The structure above this level is metal siding and deck above a 20-ft. band of precast concrete wall panels all supported by structural steel frames." However, metal siding is not included in Table 2.4-4. The staff noted that metal siding was identified as a component subject to an AMR for other structures, including the reactor building structure and station blackout structure. Please include metal siding in Table 2.4-4 or provide the justification for its omission.
- RAI 2.4.4-2. Section 2.4.4 of the LRA notes as an intended function for the Turbine Building and Main Control Room Complex: "Leak-tightness - The control room provides

airtight containment for the habitability areas housed within.” The walls separating the main control room complex from the turbine building should be leak-tight but not completely airtight, as during loss of offsite power operation, the ventilation exhaust exits the control room complex by leakage directly through the walls to the adjoining turbine building (see LR-M-384, sheet 3, locations D4, D5). The staff believes that leakage control (prohibiting infiltration, while allowing exfiltration), should be listed as an intended function of the control room complex roof and walls in Table 2.4-4. To this end, please clarify why the “leak-tightness” intended function to permit out-leakage for the appropriate turbine building and main control room complex components is not within the scope of license renewal .

#### **Station Blackout Structure and Foundations (Section 2.4.6)**

RAI 2.4.6-1. Section 2.4.6 of the LRA states that the Station Blackout (SBO) structure is a pre-fabricated steel enclosure with double doors at either end of the structure to facilitate equipment transfer in and out of the structure as required. The structure is designed to protect the equipment from damage due to external weather exposure. However, the LRA does not describe the structural components that protect the SBO equipment inside the enclosure from high wind, rainfall and potential flooding. These components could include the materials for roof and wall sealing or moisture barriers, if any. If present, such materials should be included in the scope of license renewal. Provide additional information on the components or commodities required for weather protection of the SBO structure.

#### **Yard Structures (Section 2.4.7)**

RAI 2.4.7-1. UFSAR Section 9.2 (page 9.3-4) states that the watertight dikes around the refueling water storage tank, the Unit 2 condensate storage tank, the Unit 3 condensate storage tank, and the torus water storage tank are seismically designed for the effects of maximum ground acceleration due to the Design Earthquake. However, LRA Table 2.2-2 states that the watertight dikes are not in the scope of license renewal. Provide the justification why these structures are not in the scope of license renewal.

#### **Stack (Section 2.4.8)**

RAI 2.4.8-1 Section 2.4.8 of the LRA, states that the dilution fans and eductor are housed in the lower 30 feet of the stack structure. However, Table 2.4-8 does not reference supports or housings for this equipment. Please clarify.

#### **Diesel Generator Building (Section 2.4.10)**

RAI 2.4.10-1. Section 12.2.5 of the UFSAR states, “Large openings in the diesel-generator building are either protected by missile-proof doors, by baffle walls located in front of them, or by blow-out panels.” However, blowout panels are not mentioned in the LRA text or Table 2.4-10. Blowout panels are addressed in

other structures, such as secondary containment, where they are included as items in Table 2.4-2. Seals for blowout panels are specifically addressed for the reactor building in Table 2.4-14. The staff believes that these blowout panels and seals should be within the scope of license renewal and subject to an AMR. Please indicate whether blowout panels and seals exist and whether they should be included in Table 2.4-10 or provide a justification for their exclusion.

RAI 2.4.10-2. Section 12.2.5 of the UFSAR states, "The superstructure of the building consists of cast in-place concrete walls and roof." Walls are included in Table 2.4-10 of the LRA. However, the roof is not addressed. Please clarify.

### **Recombiner Building (Section 2.4.12)**

RAI 2.4.12-1. Section 12.1 and Appendix C of the UFSAR describe the functions of the recombiner building, but do not describe the building structure. LRA Table 2.4-12, which lists components of the recombiner building structure which are within the scope of license renewal and subject to an AMR, lists walls, slabs, columns, beams, and foundation. However, Table 2.4-12 does not list the structure's roof, nor does Section 2.4.12 of the LRA provide a justification for its exclusion. The staff believes that the recombiner building roof should be within the scope of license renewal and subject to an AMR. For this reason, the staff does not have reasonable assurance that the components of the recombiner building have been properly handled in the LRA. Verify the table to ensure its completeness. If the roof is not within the scope of license renewal and subject to an AMR, provide a justification for its exclusion.

### **Component Supports (Section 2.4.13)**

RAI 2.4.13-1. Section 2.4.13 of the LRA states that the component support commodity group includes support members, anchors, and grout. The staff found that bolts are used for the support members. However, bolts can also be used to fasten the components and structures that are not used for component support. For example, Section 5.2.3.4.7 of the UFSAR (page 5.2-9) mentions bolts in relation to drywell (vessel) head; Section 5.2.3.4.5 of the UFSAR (page 5.2-8) addresses bolted heads of the equipment hatches and bolted manways. Clarify whether the bolts that are used to fasten structures for reasons other than for support are included in the component supports commodity group. If so, explain why the intended function of fastening is omitted from this commodity group. If not, indicate where these bolts are identified as subject to an AMR.

### **Insulation Commodity Group (Section 2.4.17)**

RAI 2.4.17-1. Drawing LR-M-300, Sheet 1, License Renewal Drawing Note No. 8 states that scoping for piping insulation is not shown on the license renewal drawings, but that the in-scope insulation is identified in the license renewal application. The information given in Section 2.4.17 "Insulation" states that insulation is handled as a commodity group. It is further stated that the insulation commodity group includes all insulating materials within the scope of license renewal that are used

in plant areas where temperature control is considered critical for system and component operation, or where high room temperatures could impact environmental qualification. Plant areas that require temperature control are stated to include inside the drywell, inside the HPCI and RCIC pump rooms and the outboard MSIV rooms, and on heat traced outdoor piping and components for freeze protection.

The intended function for insulation is temperature control. The applicant has considered the situation where the insulation is required to prevent heat transfer from piping or equipment to the surrounding environment. However, there are no in-scope insulation applications cited where the intent of the insulation is to prevent heat from entering piping in a post-accident condition. The performance of systems, including the RHR, HPSW and ESW, assumed in the licensing basis is based on minimal heat loads, except to the equipment serviced by the system. Without the insulation function, additional heat loads would result from condensation on the uninsulated piping, degrading system performance. Please justify why this insulation function has not been considered in determining the insulation that is within the scope of license renewal.

### **Station Blackout System (Section 2.5)**

RAI 2.5-1      The screening results in Section 2.5 do not include any offsite power system structures or components. The license renewal rule, section 10 CFR 54.4(a)(3), requires that, “all systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission’s regulations for.....station blackout (10 CFR 50.63)” be included within the scope of license renewal. The station blackout rule, section 10 CFR 50.63(a)(1), requires that each light-water-cooled power plant licensed to operate be able to withstand and recover from a station blackout of a specified duration (the coping duration) that is based upon factors that include: “(iii) The expected frequency of loss of offsite power; and (iv) The probable time needed to restore offsite power.” Licensees’ plant evaluations followed the guidance specified in NRC Regulatory Guide (RG) 1.155 and NUMARC 87-00 to determine their required plant specific coping duration. The criteria specified in RG 1.155 to calculate a plant specific coping duration were based upon the expected frequency of loss of offsite power and the probable time needed to restore offsite power, as well as the other two factors (onsite emergency ac power source redundancy and reliability) specified in 10 CFR 50.63(a)(1). In requiring that a plant’s coping duration be based on the probable time needed to restore offsite power, 10 CFR 50.63(a)(1) is specifying that the offsite power system be an assumed method of recovering from an SBO. Disregarding the offsite power system as a means of recovering from an SBO would not meet the requirements of the rule and would result in a longer required coping duration. The function of the offsite power system within the SBO rule is, therefore, to provide a means of recovering from the SBO. This meets the criteria within license renewal 10 CFR 54.4(a)(3) as a system that performs a function that demonstrates compliance with the Commission’s regulations on SBO. Based on this information the staff requires that applicable offsite power

system structures and components need to be included within the scope of license renewal and subject to an aging management review, or additional justification for its exclusion needs to be provided.

**Instrument Air System (System out-of-scope in LRA)**

RAI IA-1. The staff believes that instrument air components which support the operation of the standby gas treatment system, including valves 368-20478-01 and 368-20478-02 at location E7 and G7, respectively, and tubings at location E7 to G7 and F3 to F7 on drawing LR-M-397, sheets 2 and 3, should be within the scope of license renewal and subject to an AMR. Revise the LRA so that the components identified above are within the scope of license renewal and subject to an AMR, or provide a justification for their exclusion.

RAI IA-2. Clarify whether the following instrument air supply tubings and valves, serving air-operated valves of the drywell purge supply and exhaust filtration system, are within the scope of license renewal and subject to an AMR. The staff believes that these components should be within scope and subject to an AMR. If the components excluded from license renewal and not subject to an AMR, provide justification for their exclusion:

LRA Drawing LR-M-391, Sheet 1, Primary Containment Isolation and Control (PB APS Unit 2 and Common)

- AO-20452 through AO-20470 at locations F7&F8, E7&E8, D7&D8, F3&F4, E2&E3, D3&D4, C3&C4, and B4&B5.
- radiation detectors 430A/B/C/D AND 432A/B/C/D at locations E3&E4 and F4&F5.

LRA Drawing LR-M-391, Sheet 1, Primary Containment Isolation and Control (PB APS Unit 3)

- AO-30452 through AO-30470 at locations F7&F8, E7&E8, D7&D8, F3&F4, E2&E3, D3&D4, C3&C4, and B4&B5.
- radiation detectors 430A/B/C/D AND 432A/B/C/D at locations E3&E4 and F4&F5.