

Exelon Nuclear  
200 Exelon Way  
Kennett Square, PA 19348

www.exeloncorp.com

10CFR54

November 16, 2001

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Peach Bottom Atomic Power Station, Units 2 and 3  
Facility Operating License No. DPR-44 and DPR-56  
NRC Docket Nos. 50-277 and 50-278

Subject: Information to Resolve Issues on Methodology for Scoping and  
Screening on the License Renewal Application

Reference: Letter from Raj K. Anand (U.S. Nuclear Regulatory Commission) to  
Michael P. Gallagher (Exelon Corporation), dated October 30, 2001

Dear Sir/Madam:

Exelon Generation Company, LLC (Exelon) hereby submits the enclosed responses to the request for additional information transmitted in the reference letter. For your convenience, Attachment 1 restates the questions from the reference letter and provides our responses.

If you have any questions or require additional information, please do not hesitate to call.

Very truly yours,

*D. P. Helms / For*

Michael P. Gallagher  
Director, Licensing and Regulatory Affairs  
Mid-Atlantic Regional Operating Group

Enclosures: Affidavits, Attachment 1

cc: H. J. Miller, Administrator, Region I, USNRC  
A. C. McMurtry, USNRC Senior Resident Inspector, PBAPS

A087

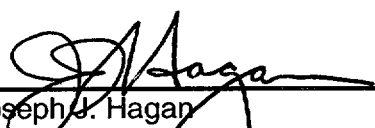
Information to Resolve Issues on Methodology for  
Scoping and Screening on the License Renewal Application  
November 16, 2001  
Page 2

bcc:	PSEG, Financial Controls and Co-Owner Affairs	(w/o enc)
	R. I. McLean, State of Maryland	(w/enc)
	R. R. Janati, Commonwealth of Pennsylvania	"
	E. J. Cullen- KSB 3-S	(w/o enc)
	J. J. Hagan - KSA 3-N	"
	J. A. Benjamin - Cantera	"
	J. Doering - PB, SMB4-9	"
	G. L. Johnston - PB, A4-1S	"
	P. J. Davison - PB, SMB3-2A	(w/enc)
	J. P. Grimes - KSA 2-N	(w/o enc)
	F. W. Polaski - KSA 1-N	(w/enc)
	A. A. Winter - PB, A4-5S	"
	D. P. Helker/JLP - KSA 1-N	"
	PBAPS Nuclear Oversight Manager - PB, SMB4-6	"
	Commitment Coordinator - KSA 3-E	"
	Correspondence Control Desk - KSA 1-N-1	"
	DAC - KSA 1-N-1	"

## Affidavit of Joseph J. Hagan

I, Joseph J. Hagan, Senior Vice President, do hereby affirm and state:

1. I am authorized to execute this affidavit on behalf of Exelon Generation Company, LLC ("EGC").
2. EGC is providing this information in support of its Application for License Renewal for the Peach Bottom Atomic Power Station Units 2 and 3 (NRC Facility Operating License Nos. DPR-44 and DPR-56; Docket Nos. 50-277 and 50-278.)
3. I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.

  
\_\_\_\_\_  
Joseph J. Hagan  
Senior Vice President

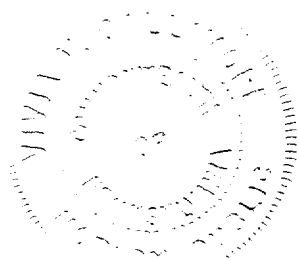
Commonwealth of Pennsylvania  
County of Chester

Subscribed and sworn to before me, a Notary Public, in and for the County and Commonwealth above named, this 16<sup>th</sup> day of November, 2001.

  
\_\_\_\_\_  
Notary Public

My Commission Expires:

Notarial Seal  
Vivia V. Gallimore, Notary Public  
Kennett Square Boro, Chester County  
My Commission Expires Oct. 6, 2003  
Member, Pennsylvania Association of Notaries



**ATTACHMENT 1**

## 2.1 SCOPING AND SCREENING METHODOLOGY

### RAI 2.1-1

Describe the scoping and screening process as shown in Figure 2.1-1 of the Peach Bottom License Renewal Application (LRA), and explain in detail how Exelon ensured that this process meets the requirements of 10 CFR 54.4(a)(1), 54.4(a)(2), 54.4(a)(3), and 54.4 (b) with respect to the intended functions of the systems, structures, and components, with respect to the requirements of § 54.21.

#### Response:

Figure 2.1-1 of the Peach Bottom LRA is a broad overview of scoping and screening, and is not a process flowchart. The figure identifies the basic steps behind scoping and screening. The steps were not necessarily performed in the order presented. In addition, some steps represent previously completed evaluations from the Current Licensing Basis (CLB), such as the results of Maintenance Rule system scoping. The scoping and screening methodology used by Exelon is described in Sections 2.1.1, 2.1.2 and 2.1.3 of the LRA. The explanation below provides additional detail of the scoping and screening methodology, to supplement the description provided in the LRA.

#### Identification of Plant Systems and Structures

A comprehensive list of systems and structures to be evaluated for license renewal scoping was produced from the Maintenance Rule Basis documentation, Component Record List, Updated Final Safety Analysis Report (UFSAR) and other plant design documentation (LRA page 2-2, Section 2.1.2.1, first paragraph). These information sources are consistent with NUREG-1800 Standard Review Plan for License Renewal Table 2.1-1, and also Table 3.1-1 of NEI 95-10 revision 3, endorsed by Regulatory Guide 1.188.

As described on page 2-4 of the LRA, the Component Record List (CRL) is the controlled database used to identify plant systems and equipment at Peach Bottom. All plant mechanical and electrical systems are uniquely identified in the CRL. The CRL also includes some non-traditional "systems" used to capture items such as doors or snubbers. The CRL is a highly reliable source for a comprehensive list of mechanical and electrical systems and components. The CRL does not include unique identification for individual plant structures. A comprehensive list of plant structures was identified from the UFSAR and plant design drawings.

#### System and Structure Scoping

The previously completed Maintenance Rule scoping evaluations were performed on a system basis, for each mechanical and electrical system identified in the CRL. License Renewal scoping evaluations were also performed on a system basis, for each mechanical and electrical system identified in the CRL. The evaluation against license renewal scoping criteria 10 CFR 54.4(a)(1) and (2) for mechanical and electrical systems is taken from the corresponding Maintenance Rule scoping criteria, as described on LRA page 2-7. For structures, the

evaluation against license renewal scoping criteria 10 CFR 54.4(a)(1) and (2) is based on the UFSAR seismic classification, as described on pages 2-7 and 2-8 of the LRA. It is recognized that the Maintenance Rule system scoping reviews did not consider Seismic II/I when evaluating the impact of non-safety related system, structure and component failures on safety related functions. For license renewal scoping, seismic II/I considerations are described on LRA page 2-8.

As described on LRA pages 2-8 through 2-10, systems and structures that are in the scope of license renewal scoping criteria 54.4(a)(3) are identified by review of appropriate plant documentation. For 10 CFR 50.48 (Fire Protection) and 10 CFR 50.63 (Station Blackout), the review is documented in license renewal position papers. For 10 CFR 50.62 (ATWS), the required components are identified in the controlled CRL database. The equipment within the scope of Environmental Qualification 10 CFR 50.49 is identified by a controlled data field in the CRL and is addressed in LRA Section 4.4 under the TLAA evaluations, and 10 CFR 50.61 (Pressurized Thermal Shock) is not applicable to boiling water reactors.

#### System Boundary Interfaces

As described on page 2-5 of the LRA, system boundary interfaces were examined to ensure that interfacing components were associated with the appropriate system for license renewal. The CRL component assignments within systems were often established based on the "normal" system functions, and not necessarily based on the functions performed during design basis events. As a result, some non-safety related systems at PBAPS include safety related components associated with the interface with other, safety related systems. For example, normally closed isolation valves in a makeup water flush connection to the safety related High Pressure Service Water (HPSW) system are safety related because they are part of the HPSW boundary during a design basis event. The makeup water connection is from the Water Treatment System, which is not safety related, but these individual isolation valves are safety related. Other examples are described on page 2-5 of the LRA, under the sub-heading of System Boundary Realignment. System boundary realignments are described in more detail in response to RAI 2.1-2.

Component listings for non-safety related systems were reviewed to check for any safety related components. This review assured that components associated with system interfaces such as described above are captured, regardless of which system they were assigned to in the CRL. Any safety related components found in non-safety related systems were included in the license renewal database. The specific functions of such components were reviewed against the plant Current Licensing Basis, on a case-by-case basis, to determine the appropriate system and system intended functions they are required to support. These component reviews are documented in the individual system scoping evaluation forms and in the license renewal database. The intended functions of these components are therefore adequately addressed in accordance with 10 CFR 54.4(b).

#### System Intended Functions

For systems in the scope of license renewal, the system intended functions are identified from the Design Baseline Documents and the UFSAR (LRA page 2-11). For structures in the scope

of license renewal, structure intended functions are identified from the UFSAR (LRA page 2-11).

### Structure and Component Screening

As part of the scoping review, component listings were obtained from the CRL. For in-scope systems, the component listings were used to assist in the development of boundary drawings, as described on pages 2-4 and 2-5 of the LRA. The component listings were also added to a license renewal database that was used to assist in component screening.

Certain types of components and commodities items are not identified in the CRL, such as piping, flex hoses, and ventilation ductwork. Such components and commodity items were identified by review of design drawings and plant walkdowns, as described on LRA pages 2-4 and 2-12, and added to the license renewal database.

The license renewal screening methodology is described in LRA Section 2.1.3, page 2-12 through 2-14. Active versus passive determinations were made in accordance with 10 CFR 54.21(a)(1)(i) and the guidance of NEI 95-10. Long-lived components were identified in accordance with 10 CFR 54.21(a)(1)(ii) and the guidance of NEI 95-10. Component level intended functions were identified for the structures and components requiring aging management review, as described on LRA page 2-13. Structure and component screening reviews for each system are documented on a license renewal screening form, in accordance with the license renewal governing procedure.

### Conclusion

The above methodology uses controlled documentation sources to assure that all plant systems, structures and components are reviewed for license renewal scoping. For systems, scoping criteria 10 CFR 54.4(a)(1) and (2) are addressed by utilizing previous system reviews performed for Maintenance Rule. For structures, scoping criteria 10 CFR 54.4(a)(1) and (2) are addressed by utilizing information in the UFSAR. Seismic II/I is also considered under 10 CFR 54.4(a)(2) scoping criterion. Scoping criterion 10 CFR 54.4(a)(3) is addressed by review of the plant documentation associated with applicable regulated events. Intended functions, as defined in 10 CFR 54.4(b), are identified for systems and structures determined to be in the scope of license renewal. Structures and components are screened to identify those that require an aging management review, in accordance with the requirements of 10 CFR 54.21, and component level intended functions are identified. This scoping and screening methodology is consistent with the guidance of NEI 95-10, and provides reasonable assurance that the passive, long-lived structures and components that should be subject to an aging management review have been identified in accordance with the license renewal rule.

### **RAI 2.1-2**

Describe the "system realignment" process and the rationale for its use. During the meeting on October 22, 2001, the staff understood that the "system realignment" process is simply a recategorization of existing systems and components for licensing renewal. Explain how the systems, structures, and components reflected in the Peach Bottom current licensing basis

[as defined by §54.3(a)] are captured in a consistent and auditable manner in the scoping process.

**Response:**

System Boundary Realignment

System boundary realignment is described by use of examples on page 2-5 of the LRA. The system boundary realignment process can be considered a re-categorization of existing components associated with interfaces between in-scope and out-of-scope systems. From a system perspective, the out-of-scope systems are not safety related in the PBAPS Current Licensing Basis (CLB). System safety classifications are documented in the Maintenance Rule scoping evaluations, which were used for license renewal scoping as described in the response to RAI 2.1-1.

System boundary interfaces were examined to ensure that interfacing components were associated with the appropriate system for license renewal. The CRL component assignments within systems were often established based on the "normal" system functions, and not necessarily based on the functions performed during design basis events. As a result, some non-safety related systems at PBAPS include safety related components associated with the interface with other, safety related systems. For example, a non-safety related system that penetrates the primary containment has containment isolation valves that are required to close under certain design basis events. These containment isolation valves are assigned in the CRL to the non-safety related process system, even though their function is directly associated with containment isolation during a design basis event.

Containment isolation valves in non-safety related systems were included with the Primary Containment Isolation system for license renewal. GALL report section V.C, "Containment Isolation Components" recognizes and addresses this case of realignment: *"The system consists of isolation barriers in lines for BWR and PWR nonsafety systems such as the plant heating, waste gas, plant drain, liquid waste, and cooling water systems."* NUREG-1800, "Standard Review Plan – License Renewal" also recognizes and addresses this type of realignment in Section 2.1.3.1 Scoping: *"An applicant may take an approach in scoping and screening that combines similar components from various systems. For example, containment isolation valves from various systems may be identified as a single system for purposes of license renewal."*

Components associated with boundaries between safety related systems and non-safety related systems were not necessarily assigned to the safety related system. These interfaces were identified and evaluated as described below.

Non-safety related systems that do not meet any of the license renewal scoping criteria from 10 CFR 54.4(a)(1), (2) or (3) do not need to be included in the scope of license renewal. Component listings for these systems were reviewed to check for any safety related components. This review assured that components associated with interfaces with safety related systems are captured, regardless of which system they were assigned to in the CRL. Any safety related components in non-safety related systems were included in the license renewal database. The specific functions of such components were reviewed against the plant



CLB, on a case-by-case basis, to determine the appropriate system and system intended functions they are required to support. These component reviews are documented in the individual system scoping evaluation forms and in the license renewal component database.

The rationale for system boundary realignment was to associate system interfacing components with the appropriate system level functions that they are required to support. This approach allows the appropriate systems to be included in the scope of license renewal, based on the functions of the system. The approach is also consistent with Maintenance Rule system scoping.

#### Systems, Structures and Components Captured

A comprehensive list of systems and structures to be evaluated for license renewal scoping was produced from the Maintenance Rule Basis documentation, Component Record List, UFSAR and other plant design documentation (LRA page 2-2). As described on page 2-4 of the LRA, the Component Record List (CRL) is the controlled database used to identify plant systems and equipment at Peach Bottom. All plant mechanical and electrical systems are uniquely identified in the CRL. The CRL is a highly reliable source for a comprehensive list of mechanical and electrical systems and components. The CRL does not include unique identification for individual plant structures. A comprehensive list of plant structures was identified from the UFSAR and plant design drawings. System and structure scoping reviews are documented on scoping review forms in accordance with an approved procedure. Therefore, all systems and structures were captured in a consistent and auditable manner in the scoping review.

With a few exceptions, the CRL is the definitive list of mechanical and electrical components at PBAPS. As discussed in the LRA on page 2-4, under the heading "Use of the Component Record List," the CRL does not include some commodity type items such as piping, flexible hoses, electrical cable or ventilation ductwork. The License Renewal governing procedure includes a list of these types of components, not found in the CRL, which should be considered during the license renewal scoping process. As discussed on page 2-12 of the LRA, these types of items were identified by plant walkdowns or review of plant design drawings.

For in-scope systems, all components in the system were downloaded from the CRL and included in the license renewal database. For out-of-scope systems, any safety related components that should be included in the scope of license renewal were downloaded and included in the license renewal database, as described above. Components not included in the CRL were identified from design drawings and plant walkdowns, and added to the license renewal database. Therefore, all components were captured in a consistent and auditable manner in the scoping review.

#### **RAI 2.1-3**

Explain the differences between the Component Record List (CRL), and the updated final safety analysis report (UFSAR) and how they are treated by the scoping process and reflected in the LRA.

**Response:**

The Component Record List (CRL) is a verified and controlled equipment database. As described on page 2-4 of the LRA, the Component Record List (CRL) is the controlled database used to identify mechanical and electrical plant systems and equipment at Peach Bottom.

The CRL is used to establish and maintain component and system identification numbers. All plant mechanical and electrical systems are uniquely identified in the CRL, and each component is assigned to a specific system. It should be noted that the CRL system numbering structure includes the identification of many smaller subsystems, and the discussion of CRL systems includes both systems and subsystems.

The CRL is also the Q-list. The CRL includes a Quality Classification for each component, which is used to identify the safety related components in the plant.

After scoping evaluations were completed for all of the CRL systems and subsystems, the resulting list was reviewed and consolidated to combine subsystems into a single system where appropriate. Systems were grouped and organized to reflect the systems as described in the UFSAR.

There is not necessarily a one-to-one correspondence of the systems in LRA Table 2.2-1 with the systems identified in the UFSAR Table of Contents. Systems that are in the scope of license renewal are all described in the UFSAR. However, some of the systems may be included in the description of another system, e.g., the Safety Grade Instrument Gas (SGIG) is not listed in the UFSAR Table of Contents as a system, but is included in the description of the Containment Atmosphere Dilution (CAD) system write up in UFSAR section 5.2.3.9.

The UFSAR is the Updated Final Safety Analysis Report and includes information that describes the facility, presents the design bases and the limits on its operation, and presents the safety analyses of the structures, systems and components and of the facility as a whole.

The UFSAR was used as the primary source for identification and scoping of plant structures. The UFSAR was also used, in conjunction with the Design Baseline Documents, to identify the intended functions of systems and structures in the scope of license renewal.

**RAI 2.1-4**

Explain, using specific examples, how the scoping and screening process was performed to ensure that structures and components (SCs) that need to be in the scope of license renewal are captured in a consistent manner, in accordance with Part 54. For examples, discuss the omission of the following components:

Battery and Emergency Switchgear Ventilation System (Section 2.3.3.9)

In Table 2.2-1 of the LRA in the comment column for Instrument Air System (page 2-21), the following comment is provided, "...Piping and components associated with nitrogen backup to the battery and emergency switchgear ventilation system are included with the battery and

emergency switchgear ventilation system.” In the section discussing the battery and emergency switchgear ventilation system, no mention is made of the “realigned” system or portion thereof. It is noted that on drawing LR-M-399, sheets 1 and 4, the realigned nitrogen backup, safety grade, pneumatic supply is shown. However, Table 2.3.3-9 on page 2-73 does not list the piping and valves associated with nitrogen backup pneumatic supply as requiring an aging management review (AMR). Explain the omission of these components.

#### Reactor Building Structure (Section 2.4.2)

UFSAR Section 12.2.1(e) states that the “watertight reactor building doors above Elevation 135.0 ft (C.D.) are weatherstripped for leak tightness at secondary containment.” However, Tables 2.3.2.8-1 and 2.4.2 do not list watertight doors or weatherstripping. The NRC staff believes that the watertight doors and weatherstripping are long-lived, passive components that are within the scope of licensing renewal, and require an AMR. Provide the basis for the omission of these components.

UFSAR Section 12.2.1(e) also states “Small amounts of water which might leak through the doors' weatherstripping would be handled by the building drainage system and pumped out. All the concrete construction below Elevation 135 ft 0 in (C.D.) is waterproofed to Elevation 128 ft 0 in (C.D.), and a fibrated bitumastic paint applied up to grade...” However, Tables 2.3.2.8-1 and 2.4.2 do not list the components of the building drainage system, waterproofing sealants or the fibrated bitumastic paint. The NRC staff believes that these are long-lived and passive components that are within the scope of licensing renewal and require an AMR. Please provide the basis for the omission of these components.

#### **Response:**

The following example is provided to show how the scoping and screening process (as described in the LRA and further explained in response to RAI 2.1-1) was performed to ensure that structures and components that need to be in the scope of license renewal are captured in a consistent manner, in accordance with Part 54. The omissions identified by the NRC staff are also addressed.

#### Identification of Plant Systems and Structures

The Battery and Emergency Switchgear Ventilation system is a system identified in the CRL. A Maintenance Rule scoping evaluation is documented for this system. The license renewal scoping and screening review for this system is documented on scoping and screening forms, in accordance with the license renewal governing procedure.

#### System and Structure Scoping

The Battery and Emergency Switchgear Ventilation system is safety related at Peach Bottom. The Maintenance Rule scoping evaluation identifies this system as safety related. Therefore, this system is in the scope of license renewal in accordance with 10 CFR 54.4(a)(1) criterion. This system is not relied upon to function during any of the regulated events. This scoping determination is documented on the license renewal scoping form.

### System Boundary Interfaces

This system includes pneumatic controls that are required for the system to perform its intended functions. The normal source of compressed gas for the pneumatic controls is from the non-safety related Instrument Air system. The design of the Battery and Emergency Switchgear Ventilation system includes nitrogen bottles to supply compressed gas to the pneumatic controls during a design basis event, without reliance on the non-safety related Instrument Air system.

This interface was reviewed, and the Instrument Air system components required to support the Battery and Emergency Switchgear Ventilation system pneumatic controls pressure boundary were identified. These instrument air system components are safety related because they support the safety related Battery and Emergency Switchgear Ventilation system pneumatic controls. The specific components were identified from a list of safety related Instrument Air system components downloaded from the CRL, and were included in the license renewal database. These components were categorized as Battery and Emergency Switchgear Ventilation system components in the license renewal database. This realignment of Instrument Air system components that interface with the Battery and Emergency Switchgear Ventilation system is documented on the system scoping forms for the Instrument Air system and the Battery and Emergency Switchgear Ventilation system.

### System Intended Functions

The Design Baseline Document identifies the safety related functions of the Battery and Emergency Switchgear Ventilation system. The system functions and intended functions are documented in the scoping review form, along with references to the appropriate drawings, UFSAR Sections and Design Baseline Document.

The Battery and Emergency Switchgear Ventilation system intended functions were reviewed when realigning the Instrument Air system components, as described above. The Instrument Air system components are required to support all of the Battery and Emergency Switchgear Ventilation system intended functions. Including the realigned Instrument Air system components with the Battery and Emergency Switchgear Ventilation system does not introduce any new system level intended functions. Component intended functions are identified for the passive, long-lived components during component screening.

### Structure and Component Screening

The components of the Battery and Emergency Switchgear Ventilation system were downloaded from the CRL and are included in the license renewal database. The realigned components from the Instrument Air system that are included with the Battery and Emergency Switchgear Ventilation system for license renewal were also obtained from the CRL and included in the license renewal database. The active/passive and long-lived determination is documented in the license renewal database for each component.

To facilitate the aging management reviews, the passive, long-lived structures and components were organized into component groups, as described on page 2-13 of the LRA. These

component groups are documented in the aging management review reports (AMR), based on system and environment.

#### LRA Presentation

The Battery and Emergency Switchgear Ventilation system is identified as within the scope of license renewal in LRA Table 2.2-1. The Battery and Emergency Switchgear Ventilation system and the system intended functions are described in LRA Section 2.3.3.9. The passive, long-lived components requiring aging management review are identified in LRA Table 2.3.3-9, except for the inadvertent omission discussed below. As indicated in LRA Section 2.3.3.9, the Battery and Emergency Switchgear Ventilation system is described in UFSAR Section 10.14 and shown on drawings LR-M-389 and LR-M-399. The components realigned from the Instrument Air system to the Battery and Emergency Switchgear Ventilation system are identified in the Comments column of Table 2.2-1, under the Instrument Air system.

As described above, the Battery and Emergency Switchgear Ventilation system includes some Instrument Air system components that are required to support the intended function of the Battery and Emergency Switchgear Ventilation system. These Instrument Air components are included in the license renewal database, and were organized into component groups and evaluated in the AMR for the gas environment. When LRA Table 2.3.3-9 was prepared, the Battery and Emergency Switchgear Ventilation system component groups in the gas environment AMR were inadvertently omitted. Thus, LRA Table 2.3.3-9 did not fully document all of the evaluations that had actually been performed as part of the AMR. LRA Table 2.3.3-9 requires the following changes, shown in *italic font and underlined*:

Component Group	Component Intended Function	Environment
Casting and Forging • Valve Bodies	• Pressure Boundary	Sheltered, <u>Dry Gas</u> , Ventilation Atmosphere
Elastomer • Fan Flex Connections	• Pressure Boundary	Sheltered, Ventilation Atmosphere
Piping • <u>Pipe</u> • Tubing	• Pressure Boundary	Sheltered, <u>Dry Gas</u> , Ventilation Atmosphere
Sheet Metal • Bird Screens	• Filter	Outdoor, Ventilation Atmosphere
Sheet Metal • Exhaust Hoods	• Pressure Boundary	Outdoor, Ventilation Atmosphere
Sheet Metal • Ducting • Plenums • Damper Enclosures • Fan Enclosures	• Pressure Boundary	Sheltered, Ventilation Atmosphere
Sheet Metal • Louvers	• Throttle	Ventilation Atmosphere

Changes will also be made to the corresponding Section 3 Table 3.3-9. The valve bodies are brass material, and the pipe is copper material. There are no aging effects requiring management for these materials in the dry gas environment.

This omission was identified by Exelon, and also by the NRC staff. Subsequent to identifying this omission, Exelon has reviewed all of the aging management review reports against the LRA tables and has not identified any other similar cases of system component groups in the AMR not properly included in the applicable LRA system table.

#### Reactor Building Structure components

The Reactor Building Structure components subject to an aging management review are included in the LRA, as described below:

Watertight doors, their gaskets, penetration seals, and other structural sealants are included in the scope of license renewal and subject to aging management review. The components were not listed in Tables 2.3.2-8 and 2.4-2 since they are not specific to the Secondary Containment System and the Reactor Building Structure. Instead the components are treated as a commodity, common to all structures in the scope of license renewal, and described in section 2.4.14, Hazard Barriers and Elastomers. Doors, their gaskets, and sealants are listed in Table 2.4-14.

Concrete walls and penetration seals prevent ground water intrusion into structures included in the scope of license renewal. Concrete walls are listed in Table 2.4-2, with applicable intended functions including flood barrier and fission product barrier (e.g. secondary containment). Similarly penetration seals and sealants (including weatherstripping) are included in Table 2.4-14. The fibrated bitumastic paint is a design feature of below ground concrete walls and not a unique structure or component; therefore it was not listed in the Tables nor reviewed separately for aging management. Rather, the concrete walls were reviewed for aging management without taking credit for the fibrated bitumastic paint.

UFSAR Section 12.2.1(e) discusses plant design features to minimize inflow of water into the reactor building during the postulated design basis flood. The Section does not provide the design basis for the reactor building floor drainage system. Instead, the reactor building floor drainage system design function is described in UFSAR Section 10.19. According to Section 10.19.1, the design function of the system is to collect and remove waste liquids from their points of origin to a suitable disposal area. The system does not perform a safety related function. It is not credited for the protection of safety related SSCs against floods. The system is also not required to demonstrate compliance with 10CFR50.48, 10CFR50.49, 10CFR50.61, 10CFR50.62, or 10CFR50.63. On this basis we concluded "Plant Equipment and Floor Drain System" is not in scope of the rule, except for components associated with the primary containment boundary, as indicated in the comments column of Table 2.2-1.

#### **RAI 2.1-5**

Explain, using specific examples, how the scoping and screening process was performed to ensure that intended functions for systems, structures and components (SSCs) that need to be

in the scope of license renewal are captured in a consistent manner, in accordance with Part 54. For examples, discuss the omission of the following intended functions:

**Residual Heat Removal System (RHRS - Section 2.3.2.5)**

The applicant is required by 10 CFR Part 54.21 to identify those structures and components subject to an aging management review. The containment spray mode of the RHRS containment cooling subsystem has spray header components, which have a spray function. These components have not been identified in Table 2.3.2-5 as one of the component groups in that table has having that function. Please correct the LRA to identify this component and its intended function.

**Fuel Handling System (FHS - Section 2.3.3.1)**

Power Generation Design Criteria 9 of UFSAR Section 1.5.1.2 states "fuel handling and storage facilities shall be designed to maintain adequate shielding and cooling for spent fuel." Failure of the fuel handling system could violate these criteria. The LRA description for this system lists "Maintain Structural Integrity" as the only function for this system. Provide the basis for omitting these functions for the fuel handling system.

**Response:**

The following example is provided to show how the scoping and screening process was performed to ensure that intended functions for systems, structures and components that need to be in the scope of license renewal are captured in a consistent manner, in accordance with Part 54. The omissions identified by the NRC staff are also addressed.

The Residual Heat Removal system is safety related at Peach Bottom. The Maintenance Rule scoping evaluation identifies this system as safety related. The Design Baseline Document identifies the safety related functions of the Residual Heat Removal system. The license renewal scoping evaluation form documents the license renewal scoping review and indicates that this system is in the scope of license renewal.

The system functions and intended functions are documented in the scoping review form, along with references to the appropriate drawings, UFSAR Sections and Design Baseline Document. The components of the Residual Heat Removal system were downloaded from the CRL and are included in the license renewal database. The active/passive and long-lived determination is documented in the license renewal database for each structure and component. As described on page 2-13 of the LRA, component intended functions are identified for each of the passive, long-lived structures and components within the scope of license renewal. The component intended functions are identified in the license renewal database, and are also identified for the corresponding component groups evaluated in the aging management review reports. For the Residual Heat Removal system, the component intended functions are identified in LRA Table 2.3.2-5.

The Residual Heat Removal (RHR) system at PBAPS includes a containment spray mode. This system intended function is described in LRA Section 2.3.2.5, under the Containment Cooling heading.

The containment spray mode of RHR utilizes ring headers located in the drywell and suppression chamber. Spray nozzles are installed on these ring headers, to provide for adequate distribution of containment spray in the drywell and suppression chamber. The RHR system P&ID shows the ring headers, but does not specifically identify the spray nozzles. These spray nozzles are also not specifically identified as components in the CRL database. The spray nozzles were considered subcomponents of the containment spray ring header piping, and therefore were not individually listed.

Exelon agrees that the spray nozzles should be identified as individual components rather than grouped under the category of containment spray ring header piping. Therefore, a separate line item for spray nozzles will be added to the license renewal database, and included in the aging management review report for the gas environment. LRA Table 2.3.2-5 will include the addition of a new row:

Component Group	Component Intended Function	Environment
Piping Specialties <ul style="list-style-type: none"><li>Spray Nozzles</li></ul>	<ul style="list-style-type: none"><li>Spray</li></ul>	Wetted Gas

Changes will also be made to the corresponding Section 3 Table 3.2-5. The spray nozzles are brass material. There are no aging effects requiring management for brass material in a wetted gas environment.

The fuel handling and storage facilities are comprised of several different systems. The PBAPS Fuel Handling System consists of the refueling platform equipment assembly and the fuel preparation machines as described in LRA Section 2.3.3.1. It does not include the spent fuel storage facility and spent fuel cooling system. Instead, the spent fuel storage facility and its function are an integral part of the reactor building structure and are addressed in Section 2.4.2 of the LRA. Components associated with the spent fuel storage facility are listed in Table 2.4-2. The power generation cooling design function for the spent fuel is provided by the "Fuel Pool Cooling and Cleanup System" described in UFSAR Section 10.5. The Fuel Pool Cooling and Cleanup System is within the scope of license renewal as listed in Table 2.2-1 and Section 2.3.3.2 of the LRA. Table 2.3.3-2 identifies the pressure boundary function associated with the cooling function of this system. Thus, The LRA does account for both the shielding and cooling functions associated with spent fuel storage.