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**SUSQUEHANNA STEAM ELECTRIC STATION  
REQUEST FOR ADDITIONAL INFORMATION FOR THE  
REVIEW OF THE SUSQUEHANNA STEAM ELECTRIC STATION  
UNITS 1 AND 2, LICENSE RENEWAL APPLICATION (LRA)  
SECTIONS B.2.13, B.2.17, 3.x, 3.2.2, 3.3.2, 3.4.2, AND 3.5.2  
PLA-6407**

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**Docket Nos. 50-387  
and 50-388**

- References:*
- 1) *PLA-6110, Mr. B. T. McKinney (PPL) to Document Control Desk (USNRC), "Application for Renewed Operating License Numbers NPF-14 and NPF-22," dated September 13, 2006.*
  - 2) *Letter from Ms. E. H. Gettys (USNRC) to Mr. B. T. McKinney (PPL), "Request for Additional Information for the Review of the Susquehanna Steam Electric Station, Units 1 and 2 License Renewal Application," dated July 23, 2008.*

In accordance with the requirements of 10 CFR 50, 51, and 54, PPL requested the renewal of the operating licenses for the Susquehanna Steam Electric Station (SSES) Units 1 and 2 in Reference 1.

Reference 2 is a request for additional information (RAI) related to License Renewal Application (LRA) Sections B.2.13, B.2.17, 3.x, 3.2.2, 3.3.2, 3.4.2, and 3.5.2. The enclosure to this letter provides the question responses and the additional requested information.

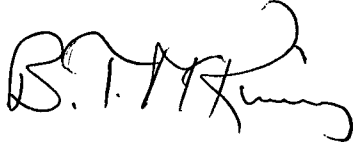
There are no new regulatory commitments contained herein as a result of the attached responses.

If you have any questions, please contact Mr. Duane L. Filchner at (610) 774-7819.

A120  
NR

I declare, under penalty of perjury, that the foregoing is true and correct.

Executed on: 8/22/08



B. T. McKinney

Enclosure: PPL Responses to NRC's Request for Additional Information (RAI)

Copy: NRC Region I

Ms. E. H. Gettys, NRC Project Manager, License Renewal, Safety

Mr. R. Janati, DEP/BRP

Mr. F. W. Jaxheimer, NRC Sr. Resident Inspector

Mr. A. L. Stuyvenberg, NRC Project Manager, License Renewal, Environmental

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**Enclosure to PLA-6407  
PPL Responses to NRC's  
Request for Additional Information (RAI)**

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**RAI B.2.13-5: (Piping Corrosion Program)**

In the license renewal application (LRA) Section B.2.13, the applicant stated an exception in the “monitoring and trending” program element that inspection frequencies are based on operating conditions and past history; flow rates, water quality, lay-up and heat exchanger design. The GALL AMP XI.M20 recommends testing and inspections are performed annually and during refueling outages.

Please confirm if these frequencies are in accordance with the information provided in Generic Letter (GL) 89-13 concerning a routine inspection and maintenance program and Section D “frequency of testing and maintenance,” in GL 89-13, Supplement 1. If not, please justify why the GALL recommended frequencies are not followed.

**PPL Response:**

The inspection frequencies for the Piping Corrosion Program are in accordance with PPL commitments under NRC GL 89-13. Inspection and cleaning frequencies are based on PPL heat exchanger’s operating conditions and past history. Flow rates, water quality, layup, and heat exchanger design are all considered. The frequency has been established in order to identify inherent problems before failures occur.

NRC GL 89-13 Supplement 1, Section III.D.3 states, “Frequent regular maintenance is an acceptable alternative to Recommended Action II, which calls for heat exchanger performance testing. A licensee or applicant can choose to routinely maintain the heat exchangers instead of testing them. Either the frequency of maintenance or the frequency of testing should be determined to ensure that the equipment will perform the intended safety functions during the intervals between maintenances or tests.” As stated in the initial PPL response to GL 89-13 (PLA-3349, dated February 23, 1990), instead of conducting a testing program PPL committed to replacing the cooling coils of difficult to inspect heat exchangers, laboratory testing of a fouled coil and a prototype of the replacement coil, and a comprehensive program that includes scheduling of maintenance, methods of cleaning, inspection criteria, reporting, and personnel qualification.

Based on past monitoring in response to NRC GL 89-13, PPL has demonstrated that existing activities and their frequency have been acceptable to detect degradation prior to the loss of component intended functions and will remain adequate for the extended period of operation. The frequency of inspections is in accordance with the information provided in NRC GL 89-13.

**RAI B.2.17-1-R:**

In RAI B.2.17-1, the staff had requested justification why Standby Gas Treatment System (SGTS) was not included in the scope of the Fire Water System Program. During a review of the program basis document, the staff noticed that the systems listed in the scope of program element did not include SGTS.

In its letter dated June 30, 2008, PP&L did not address this issue. A new component, piping, was added to Table 3.3.2-7, however, the response did not indicate if the program will be enhanced to either include SGTS in the scope or provide justification why it was not included. Please provide clarification.

**PPL Response:**

LRA Section B.2.17, Fire Water System Program, is an existing program. The specific systems within the scope of the program are not listed in the LRA. The program basis document contains details of the systems included within the scope of the program. The SGTS system should have been included in the listing of systems in the Fire Water System Program basis document, but was inadvertently omitted. There is no need to update the basis document, because the appropriate components are already addressed in the LRA and included in the plant's Fire Water System Program as discussed below.

The Standby Gas Treatment System (SGTS) credits the Fire Water System Program for managing the internal environment of the deluge valves and piping associated with the SGTS charcoal filters. The deluge valves and piping, located in the fire protection lines to the high efficiency charcoal adsorber (HECA) filters, were evaluated with the SGTS but are subject to the raw water environment of the Fire Protection System and therefore credited the Fire Water System Program for aging management.

An enhancement to the Fire Water System Program is not required. The SGTS deluge systems piping and valves in question are already included in the LRA, are identified in Technical Requirements Manual (TRM) Table 3.7.3.2-1, and the procedures that constitute the Fire Water System Program include those that perform the 18-month function testing and 18-month visual inspection of the SGTS deluge system.

**RAI 3.x.2.1-1:**

For aging management review (AMR) Table-2 line items that reference NUREG1801 Volume 2 Items V.B-1 and VII.F3-3, the generic aging lessons learned (GALL) Report recommends that the GALL Report aging management program (AMP) XI.M38 Inspection of Internal Surfaces in Miscellaneous Piping and Ducting Components be used to inspect the internal surfaces of steel ducting and components for loss of material.

However Susquehanna Steam Electric Station (SSES) has credited the System Walkdown Program for aging management of the internal surfaces of steel ducting and components for loss of material in the Standby Gas Treatment and Primary Containment Atmosphere Circulation System. The Systems Walkdown Program is the AMP that is analogous to the GALL Report AMP XI.M36 External Surfaces Monitoring which is limited to only visual examinations of alloy steel components on their external surfaces. Provide your basis for crediting the System Walkdown Program, for aging management of loss of material on the internal surfaces of these steel components in the standby gas treatment and primary containment atmosphere circulation system, particularly when there will be no inspections of the internal component surfaces.

**PPL Response:**

The “Scope of Program” element of the GALL Report AMP XI.M36 External Surfaces Monitoring states:

“The program may also be credited with managing loss of material from internal surfaces, for situations in which material and environment combinations are the same for internal and external surfaces such that external surface condition is representative of internal surface condition.”

NUREG-1801 item V.B-1 is compared to the results for the ventilation (internal) environment in the Standby Gas Treatment System for steel fan and filter housings, filter unit enclosures, piping, plenums, and valve bodies. For the aging management review results that credit the System Walkdown Program, the internal ventilation environment is considered to be equivalent to the environment for the external surfaces because the system is normally in a standby mode with the same relative conditions of temperature and humidity. The Supplemental Piping/Tank Inspection is identified to provide verification of the effectiveness of the System Walkdown Program for internal surfaces where a different environment is expected at the air/water interface of the mist eliminator loop seals. Therefore, inspection of external surfaces for indications of loss of material is considered to be representative of the condition of the internal surfaces and a one-time inspection is specified where the conditions may be different.

NUREG-1081 item VII.F3-3 is compared to the results for the ventilation (internal) environment in the Primary Containment Atmosphere Circulation System for steel fan housings and unit cooler housings. For the aging management review results that credit the System Walkdown Program, the internal ventilation environment is considered to be equivalent to the environment for the external surfaces because the system functions to circulate air within the containment. Condensation, if it occurs, is expected to form on the external surfaces of the components. Therefore, inspection of the external surfaces for indications of loss of material will be conservatively representative of the condition of

the internal surfaces. The Cooling Units Inspection is identified to provide verification of the effectiveness of the System Walkdown Program for internal surfaces where internal condensation may occur. Therefore, inspection of external surfaces for indications of loss of material is considered to be representative of the internal surface conditions and a one-time inspection is specified where the conditions may be different.

**RAI 3.2.2.1-1:**

In Tables 3.2.2.-2 and 3.2.2-4, the LRA states that reduction of heat transfer of reactor core isolation cooling (RCIC) and high pressure coolant injection (HPCI) heat exchanger copper alloy tubes in an internal environment of treated water is managed by the Heat Exchanger Inspection Program and referenced GALL Report item V.A-11. For this item, the GALL Report recommends the GALL AMP XI.M21 Closed-Cycle Cooling Water System. This GALL Program includes preventive measures such as maintaining the treated water chemistry and detection of aging effects through inspection.

Please justify why water chemistry is not credited as recommended by the GALL Report and how the one-time heat exchanger inspection activity by itself will manage the aging effect of reduction in heat transfer.

**PPL Response:**

As indicated in LRA Tables 3.2.2-2 and 3.2.2-4, the BWR Water Chemistry Program is credited for managing loss of material for the copper alloy heat exchanger tubes exposed to treated water. Since the BWR Water Chemistry Program does not contain measures for detection of aging effects through inspection, it is not credited for managing reduction in heat transfer. However, it is recognized that the same preventive actions by which the water chemistry program manages loss of material also mitigates the conditions that could result in reduction in heat transfer. The water chemistry program maintains the purity of the water and minimizes the formation of corrosion products and fouling in the system. Due to the controls of the BWR Water Chemistry Program, fouling of heat exchanger tubes is not expected to occur. As stated in LRA Section B.2.24, the Heat Exchanger Inspection will provide direct evidence as to whether, and to what extent, reduction in heat transfer due to fouling has occurred, or is likely to occur, that could result in a loss of intended function.

Implementation of the Heat Exchanger Inspection will verify that there is no reduction in heat transfer due to fouling requiring management for the subject components, or will identify appropriate corrective actions, possibly including periodic inspection or other programmatic oversight, to be taken to ensure that the component intended functions will be maintained consistent with the current licensing basis during the period of extended operation.

**RAI 3.2.2.2.4.2-1:**

LRA Section 3.2.2.2.4.2 states that the Heat Exchanger Inspection activity is a one-time inspection that will detect and characterize reduction in heat transfer of stainless steel heat exchanger tubes exposed to treated water. Standard Review Plan-License Renewal (SRP-LR) Section 3.2.2.2.4.2 recommends water chemistry and one-time inspection.

Please justify why water chemistry is not credited as recommended by the GALL Report and how the one-time heat exchanger inspection activity by itself will manage the aging effect of reduction in heat transfer.

**PPL Response:**

The BWR Water Chemistry Program is credited for managing loss of material for the stainless steel heat exchanger tubes exposed to treated water. Since the BWR Water Chemistry Program does not contain measures for detection of aging effects through inspection, it is not credited for managing reduction in heat transfer. However, it is recognized that the same preventive actions by which the water chemistry program manages loss of material also mitigates the conditions that could result in reduction in heat transfer. The water chemistry program maintains the purity of the water and minimizes the formation of corrosion products and fouling in the system. Due to the controls of the BWR Water Chemistry Program, fouling of heat exchanger tubes is not expected to occur. As stated in LRA Section B.2.24, the Heat Exchanger Inspection will provide direct evidence as to whether, and to what extent, reduction in heat transfer due to fouling has occurred, or is likely to occur, that could result in a loss of intended function.

Implementation of the Heat Exchanger Inspection will verify that there is no reduction in heat transfer due to fouling requiring management for the subject components, or will identify appropriate corrective actions, possibly including periodic inspection or other programmatic oversight, to be taken to ensure that the component intended functions will be maintained consistent with the current licensing basis during the period of extended operation.

**RAI 3.2.2.3.1-1:**

In Table 3.2.2-1, residual heat removal system, the LRA credits Supplemental Piping/Tank Inspection Program to manage the aging effect of loss of material of carbon steel piping in an indoor air external environment and has referenced Note "H" and Note "0203." The definition of Note "H" implies that these line items are not consistent with GALL Report. The Note "0203" states that this piping is in the air/water interface in the



suppression pool. However, the LRA has also referenced the GALL Report item V.D2-2 and Table 3.2.1, line item 3.2.1-31.

Please justify why a GALL Report and Table 1 item is identified, if the line item is not consistent with the GALL Report.

**PPL Response:**

The note H was used incorrectly in the LRA Table 3.2.2-1 (on LRA page 3.2-37). Note E should have been used since the component, material, environment, and aging effect are consistent with the referenced GALL item. And, this is consistent with the use of note E for a similar component, material, and environment combination in LRA Table 3.2.2-2 (on LRA page 3.2-49).

The LRA is amended as follows to revise the generic note to reflect that the item in Table 3.2.2-1 is consistent with NUREG-1801 for material, environment, and aging effect, but the Supplemental Piping/Tank Inspection, which is a plant-specific program, is credited. In addition, it was noted that the carbon steel piping in an “indoor air (external)” environment in LRA Table 3.2.2-1 (on LRA page 3.2-38) should have referenced GALL Report item V.D2-2 and Table 3.2.1, line item 3.2.1-31. This correction is also made to the LRA.

**Table 3.2.2-1 Aging Management Review Results – Residual Heat Removal System**

➤ The text in LRA Table 3.2.2-1 (on LRA page 3.2-37) is revised by addition (***bold italics***) and deletion (~~strike through~~).

<b>Table 3.2.2-1 Aging Management Review Results – Residual Heat Removal System</b>								
<b>Component / Commodity</b>	<b>Intended Function</b>	<b>Material</b>	<b>Environment</b>	<b>Aging Effect Requiring Management</b>	<b>Aging Management Programs</b>	<b>NUREG-1801 Volume 2 Item</b>	<b>Table 1 Item</b>	<b>Notes</b>
Piping	Pressure Boundary	Carbon Steel	Treated Water (Internal)	Loss of Material	BWR Water Chemistry Program  Chemistry Program Effectiveness Inspection	V.D2-33	3.2.1-14	A, 0201
			Indoor Air (External)	Loss of Material	System Walkdown Program	V.D2-2	3.2.1-31	A
				Loss of Material	Supplemental Piping/Tank Inspection	V.D2-2	3.2.1-31	<del>HE</del> , 0203

**Table 3.2.2-1 Aging Management Review Results – Residual Heat Removal System**

➤ The text in LRA Table 3.2.2-1 (on LRA page 3.2-38) is revised by addition (***bold italics***) and deletion (~~strikethrough~~).

<b>Table 3.2.2-1 Aging Management Review Results – Residual Heat Removal System</b>								
<b>Component / Commodity</b>	<b>Intended Function</b>	<b>Material</b>	<b>Environment</b>	<b>Aging Effect Requiring Management</b>	<b>Aging Management Programs</b>	<b>NUREG-1801 Volume 2 Item</b>	<b>Table 1 Item</b>	<b>Notes</b>
Piping	Pressure Boundary	Carbon Steel	Ventilation (Internal)	Loss of Material	Supplemental Piping/Tank Inspection	V.D2-16	3.2.1-32	E, 0203
				Loss of Material	System Walkdown Program	V.D2-2	3.2.1-31	C, 0204
			Indoor Air (External)	Loss of Material	Supplemental Piping/Tank Inspection	<del>V.D2-16</del> <b><i>V.D2-2</i></b>	<del>3.2.1-32</del> <b><i>3.2.1-31</i></b>	E, 0203
				Loss of Material	System Walkdown Program	V.D2-2	3.2.1-31	A

**RAI 3.3.2.1-2:**

In Table 3.3.2-4, the LRA states that reduction of heat transfer of control structure chilled water chiller evaporator copper and copper alloy tubes in an internal environment of treated water is managed by the Heat Exchanger Inspection Program, and referenced the GALL Report item VII.C2-2. For this item, the GALL Report recommends GALL AMP XI.M21 Closed-Cycle Cooling Water System. This GALL Program includes preventive measures such as maintaining the treated water chemistry and detection of aging effects through inspection.

Please justify why water chemistry is not credited as recommended by the GALL Report and how the one-time heat exchanger inspection activity by itself will manage the aging effect of reduction in heat transfer.

**PPL Response:**

As indicated in Table 3.3.2-4, the Closed Cooling Water Chemistry Program is credited for managing loss of material for the copper and copper alloy chiller evaporator and oil cooler tubes exposed to treated water. The Closed Cooling Water Chemistry Program contains an exception to performance testing and therefore is not credited for reduction in heat transfer. However, the same preventative actions by which the Closed Cooling Water Chemistry Program manages loss of material also mitigate the conditions that could result in reduction in heat transfer; maintaining the purity of the water and minimizing corrosion of the system, with its resulting corrosion products, minimizes foulants. Due to the controls of the Closed Cooling Water Chemistry Program, fouling of heat exchanger tubes is not expected to occur. As stated in LRA Section B.2.24, the Heat Exchanger Inspection will provide direct evidence as to whether, and to what extent, reduction in heat transfer due to fouling has occurred or is likely to occur that could result in a loss of intended function. Implementation of the Heat Exchanger Inspection will verify that there is no reduction in heat transfer due to fouling requiring management for the subject components, or will identify appropriate corrective actions, possibly including periodic inspection or other programmatic oversight, to be taken to ensure that the component intended functions will be maintained consistent with the current licensing basis during the period of extended operation.

**RAI 3.3.2.3.13-1:**

In Table 3.3.2-13, the LRA states that elastomers (synthetic rubber) in lubricating oil, fuel oil and raw water internal environments have no aging effect. Similarly, Teflon in a raw water environment has no aging effect. Please provide the basis for this statement.

**PPL Response:**

PPL has not identified any aging effects requiring management for the synthetic rubber and Teflon component surfaces that are exposed to the lubricating oil, fuel oil, or the raw water internal environment of the Fire Protection System, as listed in LRA Table 3.3.2-13, for the following reasons.

The applicable aging effects for elastomers are change in material properties and cracking. Change in material properties and cracking of elastomers, such as synthetic rubber, may be due to ionizing radiation, thermal exposure, or exposure to ultraviolet radiation or ozone. For polymers, such as Teflon, change in material properties may result from exposure to gamma radiation, but cracking is not a potential aging effect, and change in material properties is not influenced by thermal exposure or exposure to ultraviolet radiation or ozone.

Ionizing radiation is an applicable aging mechanism for synthetic rubber components only if they are exposed to a total integrated dose (TID) greater than  $10E6$  rads; and for Teflon components only if they are exposed to a TID greater than  $10E4$  rads. The subject flexible connections in the Fire Protection System are located in the diesel driven fire pump room, which is within the Circulating Water Pumphouse (CWPH). The CWPH is not defined as an area of the plant where harsh environments are a potential. The maximum expected (i.e., most conservative) TID in the CWPH, under normal operating conditions, for the current license period of forty (40) years is approximately  $2.0 \times 10E2$  rads. For sixty (60) years, the TID would be approximately  $3.0 \times 10E2$  rads, or 1.5 times the 40-year dose. The lubricating oil, fuel oil, and raw water environments of the Fire Protection System contain no sources of ionizing radiation, and therefore no significant contributors to the TID within the CWPH. Therefore, change in material properties and cracking due to ionizing radiation are not aging effects requiring management for synthetic rubber or Teflon components of the Fire Protection System that are exposed to lubricating oil, fuel oil, or raw water.

Thermal exposure is an applicable aging mechanism for synthetic rubber components only if they are exposed for prolonged periods to a temperature greater than  $95^{\circ}F$ . The ambient air temperature range in the CWPH, under normal operating conditions, is  $40^{\circ}F$  to  $104^{\circ}F$ . However, considering that there are no significant sources of heat within the diesel driven fire pump room during normal plant operation, it is reasonable to assume that the ambient temperature will not exceed  $95^{\circ}F$  for any prolonged period of time. Additionally, the Fire Protection System is in the standby mode during normal plant operation, so there is normally no flow through the system and the lubricating oil, fuel oil, and raw water temperatures are approximately the same as the ambient air temperature. Therefore, change in material properties and cracking due to thermal exposure are not aging effects requiring management for the synthetic rubber flexible

connections of the Fire Protection System that are exposed to lubricating oil, fuel oil, or raw water.

Ultraviolet radiation and ozone are applicable aging mechanisms only for natural rubber components that are exposed to sources of ultraviolet radiation and ozone. The flexible connections of the Fire Protection System are fabricated of synthetic rubber rather than natural rubber, and synthetic rubbers have been demonstrated to have excellent resistance to ultraviolet radiation and ozone. The lubricating oil, fuel oil, and raw water environments of the Fire Protection System contain no sources of ultraviolet radiation and ozone. Therefore, change in material properties and cracking due to ultraviolet radiation and ozone are not aging effects requiring management for the synthetic rubber flexible connections of the Fire Protection System that are exposed to lubricating oil, fuel oil, or raw water.

Therefore, there are no aging effects requiring management for the synthetic rubber and Teflon components listed in LRA Table 3.3.2-13 that are exposed internally to lubricating oil, fuel oil, and raw water.

**RAI 3.4.2.1-1:**

In Table 3.4.2-6, Main Steam System, the LRA credits Supplemental Piping/Tank Inspection Program to manage the aging effect of loss of material of carbon steel piping in an indoor air external environment and has referenced Note "E", and Note "0401." The Note "0401" states that this piping is in the air/water interface in the suppression pool. The LRA has also referenced Table 3.4.1, item 3.4.1-28.

The discussion column of Table 3.4.1, line item 3.4.1-28 only credits the System Walkdown Program, and does not address the Supplementary Piping/Tank Inspection Program. Please clarify this discrepancy.

Furthermore, for the same air/water interface environment, in some cases the LRA tables reference Note "H" and in some cases, it references Note "E". See RAI 3.2.2.3.1-1 for Note "H" example.

**PPL Response:**

Line item 3.4.2-28 in LRA Table 3.4.1 should have included the Supplemental Piping/Tank Inspection. The LRA is amended as follows to include discussion of the Supplemental Piping/Tank Inspection in Table 3.4.1, line item 3.4.1-28.

The Note "H" was used incorrectly in LRA Table 3.2.2-1. Note "E" should have been used, as the material, environment, and aging effect combination were similar to the

GALL item but a different aging management program was credited. The LRA was amended to reference Note E in Table 3.2.2-1 (LRA page 3.2-37) in response to RAI 3.2.2.3.1-1. That was the only use of Note H in comparison to a GALL item for which the Supplemental Piping/Tank Inspection was credited in the LRA.

➤ The following text in LRA Table 3.4.1 (on LRA page 3.4-28) is revised by addition (*bold italics*).

<b>Item Number</b>	<b>Component / Commodity</b>	<b>Aging Effect / Mechanism</b>	<b>Aging Management Programs</b>	<b>Further Evaluation Recommended</b>	<b>Discussion</b>
3.4.1-28	Steel external surfaces exposed to air – indoor uncontrolled (external), condensation (external) or air outdoor (external)	Loss of material due to general corrosion	External Surfaces Monitoring	No	<p>Consistent with NUREG-1801. The System Walkdown Program is credited to manage loss of material for external steel surfaces in indoor and outdoor environments. This also includes crevice and pitting corrosion on external surfaces in indoor environments due to condensation from the source (Condensate and Refueling Water Storage Tanks) being located outdoors.</p> <p>In addition, this item is applied for steel piping components in the Feedwater System, where surface temperatures are above 212°F (moisture is eliminated) and general corrosion is not a concern. A Note I is used.</p> <p><i><b>This item also includes loss of material due to pitting and crevice corrosion at air/water interfaces for carbon steel piping components in an indoor air environment. The Supplemental Piping/Tank Inspection is credited to detect and characterize loss of material for these components. A Note E is used.</b></i></p>



**RAI 3.5.2.3.10-1:**

In Table 3.5.2-10, the LRA states that galvanized steel fire doors in a “protected from weather” environment has no aging effects and credits the Fire Protection Program with a reference to GALL item VII.G-3 and Note “I.” The GALL Report Item VII.G-3 identifies an aging effect of loss of material due to wear. Please justify why loss of material due to wear is not an aging effect for galvanized steel fire doors in a “protected from weather” environment. Also, please justify why Note “I” is used, when a GALL Report line item is specified, since Note “I” by definition implies it is not consistent with the GALL Report.

**PPL Response:**

The SSES LRA conclusion that of loss of material due to wear is not an aging effect for fire doors is based on EPRI Report 1002950 “Aging Effects for Structures and Structural Components (Structural Tools),” Revision 1 Section 2.3.1.7:

“... fire doors are passive features to seal passageways through fire rated barriers. Likewise, airlocks and hatches are passive features that are part of the containment pressure boundary and allow passage into and out of containment. Both of these features are equipped with hardware and attachment/closure devices that perform their intended function with moving parts and/or with a change of configuration. As such, wear of the hardware, appurtenances, and attachment/closure mechanisms is not considered to be an aging effect, but rather a consequence of frequent or rough usage.”

Generic Note “I” (“Aging effect in NUREG-1801 for this component, material and environment combination is not applicable”) was used to indicate the AMR conclusion in the SSES LRA is not consistent with the GALL Report, i.e., the Aging Effect/Mechanism, Loss of Material/Wear, identified in the GALL Item VII.G-3 for this component, material and environment combination was determined not applicable. This agrees with the discussion provided for Item Number 3.3.1-63 in SSES LRA Table 3.3.1 i.e., “Consistent with NUREG-1801 with exceptions. For galvanized steel exposed to air – indoor uncontrolled, no aging effects were identified as requiring management; however, the Fire Protection Program in conjunction with the Structures Monitoring Program are credited to manage aging.” The credited Fire Protection Program and Structural Monitoring Program will be used to confirm the absence of aging effects during the period of extended operation as indicated in SSES LRA Table 3.5.2-10. The Fire Protection Program inspects for excessive wear of latches, strike plates, hinges, sills, and closing devices, and proper clearances (gaps) between the door, frame and threshold.