Britt T. McKinney
Sr. Vice President & Chief Nuclear Officer

PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3149 Fax 570.542.1504
btmckinney@pplweb.com

JUL 14 2008

U. S. Nuclear Regulatory Commission
Document Control Desk
Mail Stop OP1-17
Washington, DC 20555

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.2.18 and B.2.30
PLA-6386

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 June 13, 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.2.18 and B.2.30. The enclosure to this letter provides the additional requested information.

There are no new regulatory commitments contained herein as a result of the attached amendments to the SSES LRA.

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

A120
NRR

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

Executed on: 7-14-08

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

Enclosure to PLA-6386
PPL Responses to NRC's
Request for Additional Information (RAI)

RAI B.2.18-1:

In LRA AMP B.2.18, Buried Piping Surveillance Program, the applicant takes exception to the Scope of this program because this program is only used on buried Residual Heat Removal Service Water and Emergency Service Water common return header piping. The GALL AMR line items for buried piping all say for loss of material, use the Buried Piping and Tanks Inspection Program or The Buried Piping Surveillance Program. Therefore, the staff does not agree that an exception to the scope element is necessary. Please amend this AMP to remove the exception.

PPL Response:

Based on the interpretation that limiting the scope of this AMP is not an exception to the GALL, the license renewal application is amended as follows to delete the exception taken in the Buried Piping Surveillance Program AMP.

Table B-2 Consistency of SSES Aging Management Programs with NUREG-1801

- The line item for the Piping Surveillance Program, in Table B-2 on LRA page B-14 is revised by addition (***bold italics***) and deletion (~~strikethrough~~) as follows:

Program Name	New / Existing	Consistent with NUREG-1801	Exceptions to NUREG-1801	Plant-Specific	Enhancement Required
Buried Piping Surveillance Program	New	***Yes***	~~Yes~~	--	--

B.2.18 Buried Piping Surveillance Program

- The "Exceptions to NUREG-1801" in the Buried Piping Surveillance Program in Section B.2.18 (LRA page B-56) is revised by addition (***bold italics)*** and deletion (~~strikethrough~~) as follows:

Exceptions to NUREG-1801

None
~~Program Element Affected:~~

~~**• Scope –**~~
~~The scope for the Buried Piping Surveillance Program is limited to the sections of buried Residual Heat Removal Service Water (RHRSW) and Emergency Service Water (ESW) common return header piping for which damaged coatings are known to exist. Therefore, coatings are not credited by this program for aging~~

~~management. All other buried piping and tanks subject to aging management are managed by the Buried Piping and Tanks Inspection Program.~~

RAI B.2.18-2:

The staff has identified a need for information relating to the rectifiers, ground bed anodes, and other equipment that are within the scope of AMP B.2.18, Buried Piping Surveillance Program. Indicate whether these components are in scope in accordance with 10 CFR 54.4(a)(1) as safety-related or 10CFR 54.4(a)(2) as nonsafety-related with the potential to affect safety-related SSCs. If one of these related components fails, clarify whether the failure of the component will initiate a Technical Specification "limited condition of operation." Clarify whether or not SSES will include this equipment within the scope of the SSES 10 CFR Appendix B program for elements 7, 8, and 9 of AMP B.2.18.

PPL Response:

The Cathodic Protection System components cited above, rectifiers, ground bed anodes and other equipment that are within the scope of AMP B.2.18, are non safety-related and none of these components will be upgraded to safety-related. Failure of the cathodic protection system components does not result in entry into a Technical Specification limited condition of operation. The Cathodic Protection System has no safety-related function and is included in the scope of License Renewal under 10 CFR 54.4(a)(2). The nonsafety-related Cathodic Protection System components provide protection for portions of buried safety-related piping that are known to have damaged coatings. The corrective actions, confirmation process and administrative controls elements of the SSES 10 CFR 50, Appendix B program will be applied to the Buried Piping and Surveillance Program as described in the Section B.1.3 of the LRA.

No LRA changes are required as a result of this response.

RAI B.2.30-1:

The "preventative actions" program element in GALL AMP XI.M34, "Buried Piping and Tanks Inspection," states that "in accordance with industry practice, underground piping and tanks are coated during installation with a protective coating system, such as coal tar enamel with a fiberglass wrap and a kraft paper outer wrap, a polyolifin tape coating, or a fusion bonded epoxy coating to protect the piping from contacting the aggressive soil environment." The program basis document states that ductile iron and cast iron piping are not coated based on plant design specifications. Provide the technical basis for not coating the ductile iron and cast iron piping.

PPL Response:

The plant specification for furnishing and delivery of utility pipe and fittings requires that the buried ductile iron and cast iron piping in the fire protection system be provided with an external coating in accordance with ANSI A21.51. ANSI A21.51 provides, as a standard, a 1 mil thickness of bituminous coating. The coating is intended to protect the piping from oxidation during shipment and storage for cosmetic appearance. Fire protection standard NFPA-24 provides guidance for installation of buried fire protection piping. NFPA-24 only requires protective coatings for ductile iron or cast iron piping when the piping is subject to an aggressive soil environment.

The below-grade environment at the Susquehanna site is discussed for civil-structural considerations in Section 3.5 of the LRA. LRA Section 3.5.2.2.1.1 states that the below-grade environment at SSES is non-aggressive (Chlorides < 500 ppm, Sulfates <1500 ppm, and pH > 5.5) and has been confirmed by groundwater chemistry analysis. Section 3.5.2.2.1.1 further states that sampling results from 2004 and 2005 indicate a groundwater pH minimum value of 5.9, a chloride content maximum value of 26 ppm, and a sulfate content maximum value of 96 ppm.

Because the soil environment at Susquehanna is non-aggressive the ductile iron and cast iron piping in the fire protection system is not required to have a protective coating.

An inspection of buried fire protection piping was performed in association with maintenance activities in December, 2006. Underground pipe was cut in two locations for valve replacements. The internal and external surfaces of the direct burial piping were noted to be in very good condition.

Therefore, based on original installation specifications, industry guidance, review of the site-specific environment, and operating experience, the SSES ductile iron and cast iron fire protection piping does not require coating.

RAI B.2.30-2:

The GALL Report states that "Gray cast iron, which is included under the definition of steel, is also subject to a loss of material due to selective leaching, which is an aging effect managed under Chapter XI.M33, "Selective Leaching of Materials." The Selective Leaching of Materials AMP mentions that the buried piping in the fire protection piping components is subject to the Selective Leaching Program, but the Selective Leaching Program is not mentioned in the Buried Piping and Tanks Inspection Program. Please amend LRA AMP B.2.30, Buried Piping and Tanks Inspection Program, to mention that the Selective Leaching Program will be used for the buried piping for the fire protection piping components.

PPL Response:

The Buried Piping and Tanks Inspection Program is amended as follows to further clarify that loss of material due to selective leaching for buried cast iron components is managed by the Selective Leaching Inspection consistent with LRA Item 3.3.1-85, Table 3.3.2-13 items which reference it, and Section B.2.29.

B.2.30 Buried Piping and Tanks Inspection Program

- The Program Description text in LRA Section B.2.30 (on LRA page B-94) is revised by addition (***bold italics***) as follows:

Program Description

The purpose of the Buried Piping and Tanks Inspection Program is to manage the effects of corrosion on the external surfaces of piping and tanks exposed to a buried environment. The Buried Piping and Tanks Inspection Program will be a combination of a prevention program (consisting of protective coatings and wrappings where appropriate) and a condition monitoring program (consisting of visual inspections). Implementation of the Buried Piping and Tanks Inspection Program will ensure that the pressure boundary integrity of the subject components is maintained consistent with the current licensing basis during the period of extended operation.

The Buried Piping and Tanks Inspection Program is a new aging management program that will be implemented prior to the period of extended operation.

The effect of selective leaching on cast iron components exposed to a buried environment is managed by the Selective Leaching Inspection discussed in LRA Section B.2.29.

RAI B.2.30-3:

The LRA is not clear on whether there is any uncoated carbon steel piping in the fire protection piping system. Please clarify whether or not the fire protection piping system includes any uncoated carbon steel piping.

PPL Response:

No buried, uncoated, carbon steel fire protection piping has been identified at SSES. There is a small amount of buried, coated and wrapped, carbon steel pipe, but none that is uncoated. No LRA changes are required as a result of this response.