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U.S. Nuclear Regulatory Commission
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**SUSQUEHANNA STEAM ELECTRIC STATION
APPLICATION FOR RENEWED OPERATING LICENSES
NUMBERS NPF-14 AND NPF-22
PLA-6110**

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

Reference: PPL letter PLA-5526, Bryce L. Shriver (PPL) to USNRC, "Susquehanna Steam Electric Station License Renewal Application, Revision of Schedule," dated September 27, 2002.

In accordance with the requirements of 10 CFR 50, 51, and 54, PPL Susquehanna, LLC (PPL) requests the renewal of the operating licenses for the Susquehanna Steam Electric Station (SSES) Units 1 and 2. The current SSES operating licenses (Facility Operating Licenses NPF-14 and NPF-22) expire at midnight on July 17, 2022 and March 23, 2024, respectively. By this License Renewal Application (LRA), PPL seeks to extend the operating term of each unit by 20 years beyond the current expiration date.

Enclosure 1 provides a single Compact Disc (CD) of the entire LRA, including the Environmental Report (ER) and a copy of this signed cover letter as an Adobe® PDF file, formatted in a manner that is consistent with "Guidance for Electronic Submissions to the Commission," referenced in the *Federal Register* on October 10, 2003 (68 FR 58826). This CD contains files suitable for entry into the NRC's record retrieval system, ADAMS. Enclosure 2 provides a single CD containing the Boundary Drawings.

To facilitate NRC review, the following items are provided for Information-Only.

- Enclosure 3 - Eighty (80) Information-Only CDs containing the PPL SSES License Renewal Application, including the Environmental Report. The CDs contain hyperlinks within the application and between the application and the relevant portions of the SSES Final Safety Analysis Report (FSAR). Hyperlinks are also provided to the License Renewal Boundary Drawings. The FSAR and the Boundary Drawings are included as an aid in the review of the LRA, but are not part of the application.

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- Enclosure 4 - One (1) CD with the SSES License Renewal Application and the Environmental Report provided in electronic file formats suitable for posting on the NRC's web site.
- Enclosure 5 - Four (4) paper copies of the SSES License Renewal Application and the Environmental Report.
- Enclosure 6 - Four (4) paper copies of the SSES License Renewal Boundary Drawings

PPL submits the enclosed SSES LRA in accordance with the applicable NRC operating license renewal requirements of 10 CFR 54 and 51. The LRA includes an environmental report entitled, "Applicant's Environmental Report - Operating License Renewal Stage," prepared in accordance with 10 CFR 54.23 and Subpart A of 10 CFR 51.

PPL has determined that the LRA provides the appropriate administrative, technical, and environmental information sufficient to support the findings required by 10 CFR 54.29. Actions have been identified to manage the effects of aging on the structures and components subject to aging management review, such that their intended functions will be maintained consistent with the current licensing basis during the SSES renewed term of operation.

The technical information relating to plant design contained in the LRA is complete and accurate as of May 1, 2006. Current licensing basis changes that have a material effect on the content of the LRA will be identified in an amendment to the LRA that will be submitted annually while the LRA is under NRC review in accordance with 10 CFR 54.21(b). The analyses in the LRA have been performed at a power level which bounds the Current Licensed Thermal Power. The bounding power level used is the level which will be requested in a planned Extended Power Uprate license amendment request.

The LRA is organized in accordance with NUREG-1800, Rev. 1, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," dated September 2005 and NUREG-1801 Rev. 1, "Generic Aging Lessons Learned (GALL) Report," dated September 2005. The LRA is consistent with the guidance provided by NEI 95-10, "Industry Guideline for Implementing the Requirements of 10 CFR Part 54 - The License Renewal Rule," Revision 6.

The LRA meets the criteria delineated in Section 1.1 of NUREG-1800, Rev. 1, dated September 2005, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants." In addition to meeting the sufficiency criteria set forth in NUREG-1800, the LRA also contains the information outlined in the April 29, 2005 letter from the NRC to the Nuclear Energy Institute, "Information to Aid Staff in Sufficiency Review of License Renewal Applications."

The LRA was prepared by an experienced team using a structured process that included a number of in-process reviews. The proposed changes have been reviewed by the SSES Plant Operations Review Committee and by the Susquehanna Review Committee. In addition, the LRA was subjected to a number of technical and management reviews. These additional reviews included an industry peer team review, a third-party review by consultants familiar with other license renewal applications, and a review by a special subcommittee of the Susquehanna Review Committee.

Appendix A, Section A.1.4, of the SSES LRA provides a list of commitments made in this application.

If you have any questions, please contact Mr. Michael B. Detamore at (610) 774-6385.

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

Executed on: 9-13-06

A handwritten signature in black ink, appearing to read "B. T. McKinney", written in a cursive style.

B. T. McKinney

Enclosures:

1. Susquehanna Steam Electric Station - One (1) Compact Disc (CD) License Renewal Application, including the Environmental Report
2. Susquehanna Steam Electric Station - One (1) CD - Boundary Drawings
3. Susquehanna Steam Electric Station Units 1 and 2 License Renewal Application, including the Environmental Report - Eighty (80) Information-Only CDs
4. Susquehanna Steam Electric Station Units 1 and 2 License Renewal Application, including the Environmental Report - One (1) CD suitable for posting on the NRC website
5. Susquehanna Steam Electric Station Units 1 and 2 License Renewal Application, including the Environmental Report - Three (3) paper copies
6. Susquehanna Steam Electric Station Units 1 and 2 License Renewal Boundary Drawings - Four (4) paper copies

Copy: NRC Region I, without Enclosures
NRC Project Manager, NRR - License Renewal, Safety, with
Enclosures 2, 3, 4, 5 and 6
NRC Project Manager, NRR - License Renewal, Environmental,
without Enclosures
Mr. A. J. Blamey, NRC Sr. Resident Inspector, without Enclosures
Mr. R. V. Guzman, NRC Project Manager, without Enclosures
Mr. R. Janati, DEP/BRP, with one copy of Enclosure 3