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SUSQUEHANNA STEAM ELECTRIC STATIONAPPLICATION FOR RENEWED OPERATING LICENSESNUMBERS NPF-14 AND NPF-22REQUESTS FOR ADDITIONAL INFORMATION (RAI 4.1.3)PLA-6222and 50-388

References: 1) PLA-6110, Mr. B. T. McKinney (PPL) to Document Control Desk (USNRC), "Application for Renewed Operating Licenses Numbers NPF-14 and NPF-22," dated September 13, 2006.

> 2) Letter from USNRC to Mr. B. T. McKinney (PPL), "Requests for Additional Information (RAI 4.1.3) for the Review of the Susquehanna Steam Electric Station, Units 1 and 2, License Renewal Application," dated May 16, 2007.

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.

While reviewing the information contained in the SSES license renewal application, NRC identified areas where additional information is needed to complete the review. Reference 2 identifies the additional information requested by the NRC reviewers.

The enclosure to this letter provides the PPL response to each part of the NRC RAI.

There are no new regulatory commitments contained herein as a result of these responses. If you have any questions, please contact Mr. Duane L Filchner at (610) 774-7819.

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

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Executed on: <u>6-12-07</u> Lichard Dagedin

B. T. McKinney

Enclosure: PPL Responses to Request for Additional Information (RAI 4.1.3)

Copy: NRC Region I

Ms. Y. K. Diaz-Sanabria, NRC Project Manager, License Renewal, Safety Mr. A. L. Stuyvenberg, NRC Project Manager, License Renewal, Environmental Mr. A. J. Blamey, NRC Sr. Resident Inspector Mr. R. V. Guzman, NRC Sr. Project Manager Mr. R. Janati, DEP/BRP

Enclosure to PLA-6222 PPL Responses to Request for Additional Information (RAI 4.1.3)

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NRC RAI 4.1.3 Identification of Exemptions

Paragraph §54.21(c)(2) of Title 10, *Code of Federal Regulations*, Part 54 (10 CFR 54.21(c)(2)) requires an applicant for license renewal of its facilities to identify all exemptions in effect that have been granted in accordance with Paragraph §50.12 of Title 10, *Code of Federal Regulations*, Part 50 (10 CFR 50.12) and are based on time-limited aging assumptions. PPL has identified in license renewal application (LRA) Section 4.2 that the pressure-temperature (P-T) limits and the upper-shelf energy (USE) assessments for Susquehanna Steam Electric Station (SSES), Units 1 and 2 are TLAAs for the LRA. The TLAAs are required pursuant to the requirements of Appendix G to Part 50 of Title 10, *Code of Federal Regulations* (10 CFR Part 50, Appendix G).

The staff has reviewed the current licensing basis (CLB) for SSES Units 1 and 2 and has determined that the CLB includes the following exemptions that were granted to PPL in lieu of meeting the requirements of 10 CFR Part 50, Appendix G:

- (1) Paragraph 2E of Operating License NPF-14 for SSES Unit 1.
- (2) The NRC letter of February 7, 2002, from D. S. Collins (NRC) to R. G. Byram (PPL), granting PPL an exemption to use methods of ASME Code Case N-640 in the generation of the P-T limits for SSES Units 1 and 2.

The staff has also determined that these exemptions were granted in accordance with 10 CFR 50.12 and are associated with analyses that involve time-limited aging assumptions.

PPL Response:

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Before responding to the specific items of the RAI, it is important to identify that: 10 CFR 54.21(c)(2) states: "A list must be provided of plant-specific exemptions granted pursuant to 10 CFR 50.12 and in effect that are based on time-limited aging analyses as defined in § 54.3. The applicant shall provide an evaluation that justifies the continuation of these exemptions for the period of extended operation."

Thus, the regulation applies to exemptions granted pursuant to 10 CFR 50.12 that are based on time-limited aging analysis. It does not apply to exemptions associated with analyses that involve time-limited aging assumptions as stated in the RAI.

PPL LRA Section 4.1.3 states "there were no exemptions identified as being associated with a TLAA." PPL now finds that to be a technically incorrect statement. The LRA statement, in accordance with 10 CFR 54.21(c)(2), should state "there were no

exemptions identified *that are based on* a TLAA." PPL hereby amends the LRA to correct this statement.

NRC RAI 4.1.3 Part A:

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Clarify whether the exemptions listed above have been withdrawn from the applicable dockets for SSES, such that the exemptions would no longer be in effect for the CLB. If not, pursuant to 10 CFR 54.21(c)(2), PPL is required to amend the LRA to identify the exemptions listed in items (1) and (2) above as exemptions in effect that were granted in accordance with 10 CFR 50.12 and are based on time-limited aging assumptions.

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PPL Response:

The exemption related to 10 CFR Part 50, Appendix G, Paragraph 2E of Operating License NPF-14 for SSES Unit 1 has not been withdrawn. This exemption will be required to remain in effect for the operating life of SSES Unit 1. PPL is not required to identify this exemption in the LRA because this exemption is not based on any analyses that meet the 50.3 TLAA definition.

The exemption to allow the use of ASME Code Case N-640 in the generation of the P-T limits applies to SSES Units 1 and 2. PPL complies with Regulatory Guide 1.147, and since the NRC has approved the use of Code Case N-640, this exemption is no longer required. PPL is not required to identify this exemption in the LRA, since it is not based on any time-limited aging analyses.

NRC RAI 4.1.3 Part B:

Clarify whether the 10 CFR Part 50, Appendix G-based exemption referred to in Paragraph 2E of Operating License NPF-14 for SSES Unit 1 was granted relative to the USE requirements that are promulgated in Section IV.A.1 of 10 CFR Part 50, Appendix G, or the P-T limit requirements that are promulgated in Section IV.A.2 of 10 CFR Part 50, Appendix G.

PPL Response:

The Appendix G-based exemption in Paragraph 2E of Operating License NPF-14 applies to both the USE and RTndt requirements of Appendix G. Therefore, the exemption applies to both the USE requirements in Section IV.A.1 and the P-T limit requirements in Section IV.A.2. Section 5.3.1 of the NRC's SER (NUREG-0776) and Section 5.3.1.5.1 of the FSAR delineates the specific information that applies to this Appendix G-based exemption.

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NRC RAI 4.1.3 Part C:

Provide your regulatory basis that justifies whether or not the exemptions granted on the 10 CFR Part 50, Appendix G requirements, as referred to in Paragraph 2E of Operating License NPF-14 for SSES Unit 1 and in the NRC's letter of February 7, 2002, are needed for the period of extended operation.

PPL Response:

The Appendix G-based exemption has been used to calculate the USE for all the beltline materials for 54 EFPY. The exemption was also required to support the determination of the original RTndt for the vessel materials, which will still be used in calculating the adjusted reference temperature (ART). The updated USE and ART values will be required for the subsequent revisions to the P-T limit curves throughout the operating life of the plant. Therefore, the Appendix G-based exemption is needed during the period of extended operation.

There is no need to extend the exemption listed in NRC's letter of February 7, 2002. The NRC has approved Code Case N-640 in Reg. Guide 1.147 and PPL complies with Reg. Guide 1.147.

PPL has determined that no exemptions that are currently in effect for SSES Units 1 and 2 are based on a TLAA. As such, no further evaluations to justify the continuation of any exemptions are required by 10 CFR 54.21(c)(2).