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

**SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT NO. 297 TO LICENSE
NPF-14 AND PROPOSED AMENDMENT NO. 267
TO LICENSE NPF-22: APPLICATION TO MAINTAIN
THE CURRENT 10CFR50 APPENDIX J LEAKAGE TEST
SCHEDULE FOR THE PRIMARY CONTAINMENT
LEAKAGE RATE TEST PROGRAM AS DEFINED IN
TECHNICAL SPECIFICATION 5.5.12.
PLA-6244**

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

- Reference: (1) Letter PLA-6076, B. T. McKinney (PPL) to USNRC, "Susquehanna Steam Electric Station Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate," dated October 11, 2006.
- (2) Letter, Brenda L. Mozafari (NRC) to Gary Van Middlesworth, "Duane Arnold Energy Center - Issuance of Amendment Regarding Extended Power Uprate (TAC No. MB0543)," dated November 6, 2001 (ADAMS Accession No. ML013050321).
- (3) Letter, George P. Barnes (PSEG) to USNRC, "Request for License Amendment Extended Power Uprate Hope Creek Generating Station Facility Operating License NPF-57 Docket No. 50-354," dated September 18, 2006 (ADAMS Accession No. ML062680451).

In accordance with the provisions of 10 CFR 50.90, PPL Susquehanna, LLC (PPL) is submitting a request for an amendment to the Operating Licenses (NPF-14 and NPF-22) for Susquehanna Steam Electric Station Units 1 and 2.

The peak Primary Containment pressure submitted in Reference 1, PPL's proposed amendment for Constant Pressure Power Uprate (CPPU), would increase slightly following a LOCA. The Containment Isolation Valves in the current 10CFR50 Appendix J leakage test program would accordingly be required to be tested at the slightly higher CPPU pressure.

This proposed amendment adds a new license condition to the Unit 1 and the Unit 2 Operating Licenses to permit the valves in the 10CFR50 Appendix J leakage test program to be tested at the higher pressure during the next scheduled test rather than requiring all

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of the valves to be tested at the higher pressure prior to the implementation of the CPPU amendment.

These proposed changes have been reviewed by both the Plant Operations Review Committee and the Susquehanna Review Committee.

Attachment 1 provides the evaluation for the proposed change. Attachment 2 provides the corresponding "marked-up" pages for each Facility Operating License. No new regulatory commitments are made herein.

Approval of this proposed License Amendment is requested by January 1, 2008, in order to allow adequate time for proper planning and preparation of Unit 1 Spring 2008 Refueling Outage activities. The amendment will be implemented following approval of the CPPU amendment.

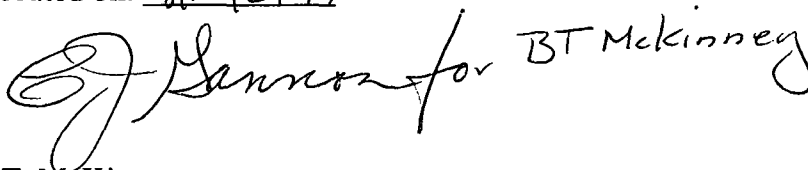
This amendment request is similar to the License Amendment granted to Duane Arnold on November 6, 2001 (Reference 2) and the request by PSEG dated September 18, 2006 (Reference 3), that is currently undergoing NRC review.

In accordance with 10 CFR 50.91(b), PPL Susquehanna, LLC is providing the Commonwealth of Pennsylvania with a copy of this proposed License Amendment request.

If you have any questions regarding this submittal, please contact Mr. C. T. Coddington at (610) 774-4019.

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

Executed on: 8/14/2007

A handwritten signature in black ink, appearing to read "B. T. McKinney", with the word "for" written in the middle.

B. T. McKinney

Attachments:

- Attachment 1 – Description and Assessment of the Proposed Change
- Attachment 2 – Proposed License Conditions to Unit 1 and 2 Facility Operating Licenses (Mark-ups)

Copy: NRC Region I

Mr. R. V. Guzman, NRC Sr. Project Manager
Mr. R. R. Janati, DEP/BRP
Mr. F. W. Jaxheimer, NRC Sr. Resident Inspector

Attachment 1 to PLA-6244

Description and Assessment of the Proposed Change

DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The Operating Licenses NPF-14 and NPF-22 for Susquehanna Steam Electric Station Units 1 and 2 (SSES) will each have an additional license condition. The proposed License Condition 2.C.34 for Unit 1 and proposed License Condition 2.C.18 for Unit 2 will be added to allow the continued use of the present testing schedule for 10CFR50 Appendix J, Option B valve testing after the approval of the Constant Pressure Power Uprate (CPPU) amendment requested by PPL on October 11, 2006.

2.0 DESCRIPTION OF PROPOSED AMENDMENT

Proposed License Condition 2.C.34 for NPF-14 and proposed License Condition 2.C.18 for NPF-22 are as follows:

Those Primary Containment Leakage Rate Program tests, as modified by approved exemptions, required by 10CFR50 Appendix J, Option B and Technical Specification 5.5.12, are not required to be performed at the higher pressure until their next scheduled performance after implementation of the Constant Pressure Power Uprate Amendment requested by PPL on October 11, 2006.

3.0 BACKGROUND

On October 11, 2006 (Reference 1), PPL requested proposed license amendments to allow modifications and operational changes which would enable an increase in each units' electrical output. This request did not address the current Primary Containment Leakage Rate Program requirements, described in Technical Specification 5.5.12 as a result of an increase in peak containment pressure associated with operation at CPPU conditions. The license amendments requested in this letter address scheduling of Appendix J, Option B testing after NRC approval and implementation of the CPPU license amendment.

The current performance-based Primary Containment Leakage Rate Test Program, as modified by approved exemptions, is required by 10CFR 50 Appendix J, Option B and Technical Specification 5.5.12. The CPPU will increase the calculated peak containment pressure (Pa) from 45.0 psig to 48.6 psig. The requested new license condition would allow leak rate tests required by Technical Specification 5.5.12 to be considered to be met

upon NRC approval and implementation of the proposed CPPU license amendment until the next scheduled performance of the test.

On November 6, 2001 Duane Arnold Energy Center received NRC approval to implement a similar request as part of a license amendment approving their Extended Power Uprate (Reference 2). PSEG requested a similar amendment in their license amendment for Extended Power Uprate (Reference 3).

4.0 TECHNICAL ANALYSIS

The current performance-based Primary Containment Leakage Rate Test Program, as modified by approved exemptions, is required by 10CFR50 Appendix J, Option B and Technical Specification 5.5.12. The CPPU license amendment will slightly increase the calculated peak containment pressure (Pa) from 45 psig to 48.6 psig. The requested new license condition would allow Primary Containment Local Leak Rate Tests (LLRTs), required by Technical Specification 5.5.12, to be performed at the higher peak containment pressure during the next scheduled interval upon implementation of the proposed CPPU license amendment.

The Unit 1 and Unit 2 Primary Containment Integrated Leak Rate Tests (ILRTs) were successfully completed in April 2006 and April 2007, respectively, at or greater than the CPPU calculated peak primary containment test pressure (Pa) of 48.6 psig. The Unit 1 and Unit 2 ILRT Type A test results are:

Test Result	Unit 1	Unit 2	Acceptance Criteria
As Found	0.36851 La	0.4162 La	≤ 1.0 La
As Left	0.2977 La	0.3592 La	≤ 0.75 La

The LLRT Type B & C Test results for Unit 1 and Unit 2 are as follows:

Unit Number	1	2	Acceptance Criteria
	67,248 sccm (0.21 La)	98,782 sccm(0.31 La)	190,774.7 sccm (0.6La)

The LLRTs performed during the Unit 2 Spring 2007 Refueling Outage were performed at the CPPU elevated test pressure with no appreciable change in the number of valves requiring repair/rework. During the Spring 2007 Refueling Outage, 3 of 180 LLRTs (performed at the CPPU pressure) failed to pressurize, versus 4 of 85 LLRTs performed (at the lower pressure) during the Unit 2 Spring 2005 Refueling Outage.

The Primary Containment Integrated Leak Rate Test results performed at the new CPPU calculated pressure and the current Unit 2 LLRT results performed at CPPU conditions showed substantial margin to the leakage rate acceptance limits. Performing leak rate tests merely to document compliance unnecessarily diverts resources, affects plant operations, potentially causes additional personnel dose and does not improve overall plant safety. Therefore, performing LLRTs on the remaining Unit 1 and 2 valves prior to implementation of CPPU is not necessary.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

PPL Susquehanna, LLC (PPL) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated?

Response: No.

The proposed License Condition change does not involve any physical change to structures, systems, or components (SSCs) and does not alter the method of operation or control of SSCs. The current assumptions in the safety analysis regarding accident initiators and mitigation of accidents are unaffected by this change. No additional failure modes or mechanisms are being introduced and the likelihood of previously analyzed failures remains unchanged.

Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed change does not involve a physical alteration of the plant. No new equipment is being introduced and installed equipment is not being operated in a new or different manner. There are no setpoints, at which protective or mitigative actions are initiated, affected by this change. This change will not alter the manner in which equipment operation is initiated, nor will the function demands on credited equipment be changed. No alterations in the procedures that ensure the plant remains within analyzed limits are being proposed, and no changes are

being made to the procedures relied upon to respond to an off-normal event as described in the FSAR. As such, no new failure modes are being introduced. The change does not alter assumptions made in the safety analysis and licensing basis.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The margin of safety is established through equipment design, operating parameters, and the setpoints at which automatic actions are initiated. The proposed change is acceptable because of the satisfactory performance of the Primary Containment Integrated Leak Rate Tests on both Unit 1 and Unit 2 at the new calculated pressure and the substantial margin to leakage rate acceptance limits based upon the Integrated Leak Rate Test and the current LLRT results. Therefore, the plant response to analyzed events will continue to provide the margin of safety assumed by the analysis.

5.2 Applicable Regulatory Requirements/Criteria

5.2.1 Analysis

10CFR 50.54 "Conditions of Licenses," in Section (o) states that primary reactor containments for water cooled power reactor(s) (such as Susquehanna SES) are subject to the requirements set forth in 10CFR50, Appendix J.

The introduction to 10CFR50, Appendix J, includes two options, for primary containment leakage testing, (A or B), either of which can be chosen to meet the requirements of Appendix J.

10CFR50, Appendix J, Option B states in part that these test requirements ensure that (a) leakage through these containments or systems and components penetrating these containments does not exceed allowable leakage rates specified in the Technical Specifications and (b) integrity of the containment structure is maintained during its service life.

10CFR50, Appendix J, Option B states that the tests must demonstrate that the sum of the leakage rates at accident pressure of Type B tests, and pathway leakage rates from Type C tests, is less than the performance criterion (La) with margin, as specified in the Technical Specifications.

Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, provides guidance on complying with Option B to Appendix J of 10CFR50.

The Primary Containment Leakage Rate Testing Program as described in Technical Specification Section 5.5.12 shall comply with 10CFR50.54(o) and 10CFR50, Appendix J as modified by approved exceptions. The program shall be in accordance with Regulatory Guide 1.163 as modified by the exceptions contained in Technical Specification Section 5.5.12.

5.2.2 Conclusion

In conclusion, based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATIONS

10 CFR 51.22(c)(9) identifies certain licensing and regulatory actions, which are eligible for categorical exclusion from the requirement to perform an environmental assessment. A proposed amendment to an operating license for a facility does not require an environmental assessment if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant hazards consideration; (2) result in a significant change in the types or significant increase in the amounts of any effluents that may be released offsite; or (3) result in a significant increase in individual or cumulative occupational radiation exposure. PPL Susquehanna, LLC has evaluated the proposed change and has determined that the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Accordingly, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared in connection with issuance of the amendment. The basis for this determination, using the above criteria, follows:

Basis

As demonstrated in the No Significant Hazards Consideration Evaluation, the proposed License Condition amendment does not involve a significant hazards consideration.

There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite. Also, there is no significant increase in individual or cumulative occupational radiation exposure. The proposed change does not involve any physical alteration of the plant (no new or different type of equipment will be installed) or change in methods governing normal plant operation.

7.0 REFERENCES

- (1) Letter PLA-6076, B. T. McKinney (PPL) to USNRC, "Susquehanna Steam Electric Station Proposed License Amendment Numbers 285 for Unit 1 Operating License No.NPF-14 and 253 for Unit 2 Operating License No.NPF-22: Constant Pressure Power Uprate," dated October 11, 2006.
- (2) Letter, Brenda L. Mozafari (NRC) to Gary Van Middlesworth, "Duane Arnold Energy Center – Issuance of Amendment Regarding Extended Power Uprate (TAC No. MB0543)," dated November 6, 2001 (ADAMS Accession No. ML013050321).
- (3) Letter, George P. Barnes (PSEG) to USNRC, "Request for License Amendment Extended Power Uprate Hope Creek Generating Station Facility Operating License NPF-57 Docket No. 50-354," dated September 18, 2006 (ADAMS Accession No. ML062680451).

Attachment 2 to PLA-6244
Proposed License Conditions to Unit 1 and 2
Facility Operating Licenses
(Mark-ups)

(ESW) system, approved by the staff, to eliminate single failure in the ESW system which leads to the need for an uncooled residual heat removal (RHR) pump.

(33) The Additional Conditions contained in Appendix C, as revised through Amendment No. 188, are hereby incorporated into this license. PPL Susquehanna, LLC shall operate the facility in accordance with the Additional Conditions.

(34) Those Primary Containment Leakage Rate Program tests, as modified by approved exemptions, required by 10CFR50 Appendix J, Option B and Technical Specification 5.5.12 are not required to be performed at the higher pressure until their next scheduled performance after implementation of the Constant Pressure Power Uprate amendment requested by PPL on October 11, 2006.

- D. The operating licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plan, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan and Security and Contingency Plan for Independent Spent Fuel Storage Facility," and was submitted October 8, 2004.
- E. Exemptions from certain requirements of Appendices G and H to 10 CFR Part 50 are described in the Safety Evaluation Report and Supplements 1 and 2 to the Safety Evaluation Report. In addition, an exemption was requested until receipt of new fuel for first refueling from the requirements for criticality monitors in the spent fuel pool area, 10 CFR Part 70.24. Also, an exemption was requested from the requirements of Appendix J of 10 CFR Part 50 for the first fuel cycle when performing local leak rate testing of Residual Heat Removal (RHR) relief valves in accordance with Technical Specification 4.6.1.2. This latter exemption is described in the safety evaluation of License Amendment No. 13. These exemptions are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest, and have been granted pursuant to 10 CFR 50.12. Except as here exempted, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, and the rules and regulations of the Commission and the provisions of the Act.
- F. This license is subject to the following additional condition for the protection of

(16) Formal FEMA Finding

In the event the NRC finds that lack of progress in completion of procedures in FEMA final rule, 44 CFR 350, is an indication that a major substantial problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR 50.54(s)(2) will apply.

(17) Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 162, are hereby incorporated into this license. PPL Susquehanna, LLC shall operate the facility in accordance with the Additional Conditions.

(18) Those Primary Containment Leakage Rate Program tests, as modified by approved exemptions, required by 10CFR50 Appendix J, Option B and Technical Specification 5.5.12 are not required to be performed at the higher pressure until their next scheduled performance after implementation of the Constant Pressure Power Uprate amendment requested by PPL on October 11, 2006.

D. The operating licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The plan, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan and Security and Contingency Plan for Independent Spent Fuel Storage Facility," and was submitted October 8, 2004.

E. Reporting to the Commission:

PPL Susquehanna, LLC shall report any violations of the requirements contained in Section 2, Items C(1), C(3) through C(16) of this license within twenty-four (24) hours. Initial notification shall be made in accordance with the provisions of 10 CFR 50.72 with written followup in accordance with the procedures described in 10 CFR 50.73 (b), (c), and (e).

F. PPL Susquehanna, LLC shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.