

April 25, 2005

Mr. Bryce L. Shriver
President-PPL Generation
and Chief Nuclear Officer
PPL Susquehanna, LLC
Two North Ninth Street, GENTW15
Allentown, PA 18101-1179

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2 - ISSUANCE OF
AMENDMENT REGARDING CHANGES TO REACTOR PRESSURE VESSEL
PRESSURE-TEMPERATURE LIMITS (TAC NO. MC4534)

Dear Mr. Shriver:

The Commission has issued the enclosed Amendment No. 197 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station, Unit 2. This amendment consists of changes to the Technical Specifications in response to your application dated September 22, 2004.

This amendment extends the validity of the reactor pressure vessel pressure-temperature limit curves from May 1, 2005, to May 1, 2006.

A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's Biweekly *Federal Register* Notice.

Sincerely,

/RA/

Richard V. Guzman, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-388

Enclosures: 1. Amendment No. 197 to
License No. NPF-22
2. Safety Evaluation

cc w/encls: See next page

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PUBLIC PDI-1 RF RLaufer RGuzman MO'Brien OGC
ACRS GHill(2) TBoyce LLois YHsii MShanbaky, RI
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* SE provided. No major changes made.

Accession No.: ML051020132

Package No.: ML

TSs: ML

OFFICE	PDI-1/PM	PDI-2/LA	SRXB *	OGC	PDI-1/SC
NAME	RGuzman	MO'Brien	JUhle	KKannler	RLaufer
DATE	4/22/05	4/22/05	11/9/04	4/18/05	4/22/05

OFFICIAL RECORD COPY

Susquehanna Steam Electric Station, Units 1 and 2

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PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 197
License No. NPF-22

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:
 - A. The application for the amendment filed by PPL Susquehanna, LLC, dated September 22, 2004, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-22 is hereby amended to read as follows:

- (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 197 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PPL Susquehanna, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard J. Laufer, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: April 25, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 197

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

TS/3.4-30
TS/3.4-30a
TS/3.4-30b

INSERT

TS/3.4-30
TS/3.4-30a
TS/3.4-30b

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 197 TO FACILITY OPERATING LICENSE NO. NPF-22

PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

DOCKET NO. 50-388

1.0 INTRODUCTION

By application dated September 22, 2004 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML042720427), PPL Susquehanna, LLC, (PPL, the licensee), requested changes to the Technical Specifications (TSs) for Susquehanna Steam Electric Station, Unit 2 (SSES-2). The proposed changes extend the validity of the reactor pressure vessel (RPV) pressure-temperature (P-T) limit curves from May 1, 2005, to May 1, 2006.

2.0 REGULATORY EVALUATION

2.1 Regulatory Requirements

The regulatory requirements and guidance which the Nuclear Regulatory Commission (NRC) staff considered in its review of the application are as follows:

1. Title 10 of the *Code of Federal Regulations* (10 CFR) establishes the fundamental regulatory requirements with respect to fluid systems at nuclear power plants. Specifically, General Design Criterion 31, "Fracture prevention of reactor coolant pressure boundary," in Appendix A to Part 50, "General Design Criteria for Nuclear Power Plants," states, in part, that the reactor coolant pressure boundary shall be designed with sufficient margin to assure that when stressed under operating, maintenance, testing, and postulated accident conditions (1) the boundary behaves in a nonbrittle manner, and (2) the probability of rapidly propagating fracture is minimized.
2. Section 50.60, "Acceptance criteria for fracture prevention measures for lightwater nuclear power reactors for normal operation," requires that the pressure and temperature limits as well as the associated vessel surveillance program are consistent with 10 CFR Part 50, Appendix G, "Fracture Toughness Requirements," and 10 CFR Part 50, Appendix H, "Reactor Vessel Material Surveillance Program Requirements."
3. Regulatory Guide 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence," provides the calculations and measurement procedures that are acceptable to the NRC for determining pressure vessel fluence.

3.0 TECHNICAL EVALUATION

3.1 PPL's Proposed Change

PPL proposed to revise the SSES-2 TSs for RPV P-T curves. The current end of validity or expiration date of the curves is May 1, 2005. The proposed change extends the expiration date until May 1, 2006, for SSES-2 TS Figures 3.4.10-1, 3.4.10-2, and 3.4.10-3.

3.2 NRC Evaluation

The NRC staff has reviewed the justification for the proposed revision. Based on results of the review, the NRC staff concludes that extending the expiration date of the SSES-2 P-T curves for an additional year to May 1, 2006, is acceptable.

The basis for the approval of the current P-T curves is the conservatism in the estimated vessel irradiation at the end of life and the irradiation at the end of the proposed extension of the P-T curves. NRC staff experience has shown that deviations in vessel fluence calculations not performed with an approved methodology is on the order of $\pm 40\%$. For the current P-T curves approved in Amendments Nos. 200 and 174 dated February 2, 2002, for SSES-1 and 2, respectively (ADAMS Accession No. ML013520605), the NRC staff estimated that the accumulated vessel irradiation exposure (including the power uprate) will be 17.648 effective full power years (EFPYs) in May 2005. PPL's September 22, 2004, application estimates that the additional exposure for the additional year will be 0.987 for a total of 18.635 EFPYs (including the power uprate) to May 1, 2006.

Considering that the current P-T curve vessel fluence was estimated for 32 EFPYs, the margin of conservatism is over 40%; therefore, this compensates the NRC staff's estimated margin of possible methodology error. Therefore, the proposed extension of the P-T curves is acceptable.

In summary, the NRC staff finds that the proposed extension of the range of validity for the SSES-2 P-T curves in Figures 3.4.10-1, 3.4.10-2, and 3.4.10-3 is acceptable because there is sufficient margin in the present P-T curves for the proposed interim period of operation.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (69 FR 70721). Accordingly, the amendment meets the eligibility criteria for categorical

exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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.

Principal Contributor: L. Lois

Date: April 25, 2005