February 28, 2001

Mr. Robert G. Byram
Senior Vice President
and Chief Nuclear Officer
PPL, Susquehanna, LLC
2 North Ninth Street
Allentown, PA 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENT RE: ALTERNATE RELOAD ANALYSIS METHOD (TAC NOS. MA8481 AND MA8482)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 189 to Facility Operating License No. NPF-14 and Amendment No. 163 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station (SSES), Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to PP&L, Inc.'s, application dated February 29, 2000. These amendments incorporate a reference to Supplement 3 “Application Enhancements” for the approved Topical Report PL-NF-90-001-A, “Application of Reactor Analysis Methods for BWR [Boiling Water Reactor] Design and Analysis," into TS 5.6.5, Core Operating Limits Report.

On July 1, 2000, the licenses held by PP&L, Inc., for SSES Units 1 and 2, were transferred to PPL Susquehanna, LLC. By letter dated February 22, 2001, PPL Susquehanna, LLC, requested that the U.S. Nuclear Regulatory Commission continue to review and act upon all requests before the Commission which had been submitted by PP&L, Inc.

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

Sincerely,

/RA/

Robert G. Schaaf, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

Enclosures: 1. Amendment No. 189 to License No. NPF-14
2. Amendment No. 163 to License No. NPF-22
3. Safety Evaluation

cc w/encls: See next page

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PDI-1 Reading	RSchaaf	WBeckner	
EAdensam	OGC	ACRS	
MGamberoni	GHill(4)	CCowgill, RGN-I	

**See previous concurrence.
*No major changes to SE.

ACCESSION NO. ML010230411

OFFICE	PDI-1/PM	PDI-2/LA	SRXB/SC	OGC	PDI-1/SC
NAME	RSchaaf	MO'Brien	RCaruso*	RWeissman**	MGamberoni
DATE	2/28/01	2/28/01	SE dtd10/2/00	2/12/01	2/28/01

OFFICIAL RECORD COPY

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Units 1 and 2

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PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 189
License No. NPF-14

1. The Nuclear Regulatory Commission (the Commission or the NRC) having found that:

   A. The application for the amendment filed by PP&L, Inc. (the licensee before July 1, 2000), dated February 29, 2000, 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-14 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. 189 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/

Marsha Gamberoni, 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: February 28, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 189

FACILITY OPERATING LICENSE NO. NPF-14

DOCKET NO. 50-387

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	INSERT
5.0-23	5.0-23
5.0-24	5.0-24

PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 163
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 PP&L, Inc. (the licensee before July 1, 2000), dated February 29, 2000, 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. 163 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/

Marsha Gamberoni, 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: February 28, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 163

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE	INSERT
5.0-23	5.0-23

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 189 TO FACILITY OPERATING LICENSE NO. NPF-14

AND AMENDMENT NO. 163 TO FACILITY OPERATING LICENSE NO. NPF-22

PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 388

1.0 INTRODUCTION

By letter dated February 29, 2000 (Reference 1), PP&L, Inc. (the licensee before July 1, 2000), proposed changes to the Technical Specifications (TSs) for the Susquehanna Steam Electric Station (SSES), Units 1 and 2. The proposed TS changes would incorporate a reference to Supplement 3 "Application Enhancements" (included in Reference 1) for the approved Topical Report PL-NF-90-001-A, "Application of Reactor Analysis Methods for BWR [Boiling Water Reactor] Design and Analysis," into TS 5.6.5, Core Operating Limits Report (COLR). Supplement 3 describes alternative reload licensing analysis methodologies to the previously approved methodologies (References 2, 3, and 4) for the analysis of the rotated bundle event, the control rod withdrawal error event, and the recirculation flow controller failure event.

2.0 EVALUATION

The proposed change would add to TS 5.6.5.b a reference to a new approved topical report supplement, PL-NF-90-001, Supplement 3-A, "Application of Reactor Analysis Methods for BWR Design and Analysis: Application Enhancements," September 1999. Supplement 3 describes in detail each event with the current reload analysis approach and details the proposed alternative licensing analysis method approach and its justification. No changes are proposed in the previously approved analytical methodologies. The enhanced application of these methodologies may be used to analyze three events, as set forth below.

2.1 Rotated Bundle Event Analysis

Supplement 3 supports changes to the rotated bundle analysis that result in a methodology more consistent with NUREG-0800, "Standard Review Plan," (SRP) and with methods approved for application by PPL's current fuel vendor. The rotated bundle event is currently analyzed as a moderate frequency event. The proposed alternative method will analyze the

rotated bundle event as an infrequent event. This is consistent with Nuclear Regulatory Commission (NRC) guidance in the SRP and the frequency classification of the event in the SSES Final Safety Analysis Report, and therefore, is acceptable to the NRC staff.

2.2 Rod Withdrawal Error Analysis

Supplement 3 supports revisions to the current rod withdrawal error (RWE) event methodology to re-incorporate credit for the Rod Block Monitor (RBM). The current RWE analysis does not credit the RBM system to limit the extent of an inadvertent rod withdrawal. PPL has implemented plant and procedural improvements that have improved the reliability of the RBM system to a level consistent with industry standards. The analytical acceptance criteria for the event are not affected. Accordingly, this is acceptable to the NRC staff.

2.3 Recirculation Flow Controller Failure Analysis

Supplement 3 supports revisions to the recirculation flow controller failure analysis to incorporate the currently approved steady-state nodal simulation methodology as an alternative to the application of the approved transient analysis methodology using RETRAN. The proposed alternative method uses the previously approved steady state nodal simulation methodology instead of the approved RETRAN code methodology. The steady state nodal analysis method produces final operating limits that have been shown to be consistent with the RETRAN analysis method. The analytical acceptance criteria for the event analysis is not affected. Accordingly, this is acceptable to the NRC staff.

The NRC staff has reviewed the proposed changes to the approved Topical Report, PL-NF-90-001-A, by use of Supplement 3 to be added to the list of approved methodologies in the Units 1 and 2 TS 5.6.5.b. The NRC staff finds the changes acceptable because these alternative methods will result in conservative and safe core limits that are consistent with the NRC SRP. These changes revise the list of methodologies to reflect the enhanced application of previously-approved methodologies, and are consistent with the guidance of Generic Letter (GL) 83-11, Supplement 1, for the use of previously-approved methodologies. One new topical report supplement is added to TS 5.6.5.b. This new topical report is PL-NF-90-001, Supplement 3-A, “Application of Reactor Analysis Methods for BWR Design and Analysis: Application Enhancements,” September 1999.

2.4 Conclusions

Based on its review, as discussed above, the NRC staff concludes that the proposed TS 5.6.5.b revision is acceptable for SSES Units 1 and 2 in order to include Supplement 3 to PL-NF-90-001-A in the references for the COLR methodologies. The enhanced application of methodologies described in Supplement 3 is consistent with both the SRP and GL 83-11, Supplement 1, guidance. Use of the alternative methods will result in conservative core limits, and therefore, the changes are acceptable to the staff.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments relate to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

6.0 REFERENCES

1. Letter (PLA-5156) from R. G. Byram, PP&L, Inc., to USNRC, "Susquehanna Steam Electric Station Proposed Amendment No. 230 to License NPF-14: Alternate Reload Analysis Methods and Amendment No. 193 to License NPF-22: Alternate Reload Analysis Methods," February 29, 2000.

2. “Application of Reactor Analysis Methods for BWR Design and Analysis,” PL-NF-90-001-A, July 1992, with Supplement 1, “Loss of Feedwater Heating Changes & Use of RETRAN MOD 5.1," September 1994, and Supplement 2, “CASMO-3G Code and ANF-B Critical Power Correlation,” July 1996.

3. “Qualification of Steady State Core Physics Methods for BWR Design and Analysis,” PL-NF-87-001-A, July 1988.

4. “Qualification of Transient Analysis Methods for BWR Design and Analysis,” PL-NF-89-005-A, July 1992.

Principal Contributor: E. Kendrick

Date: February 28, 2001