

January 31, 2002

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, UNIT 1 - ISSUANCE OF
AMENDMENT RE: MINIMUM CRITICAL POWER RATIO SAFETY LIMIT
(TAC NO. MB2100)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 199 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station, Unit 1, in response to PPL Susquehanna, LLC's, application dated May 31, 2001, as supplemented by letter dated December 5, 2001. This amendment changes the Technical Specifications (TSs) by revising the minimum critical power ratio safety limits values for Unit 1, Cycle 13 operation.

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/

Daniel S. Collins, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-387

Enclosures: 1. Amendment No. 199 to
License No. NPF-14
2. Safety Evaluation

cc w/encls: See next page

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Units 1 & 2

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PDI-1 R/F	MO'Brien	GHill(2)	RCaruso	BPlatchek, RGN-1
EAdensam	DCollins	WBeckner		

ACCESSION NO.: ML020100603

*SE Received, no major changes made

OFFICE	PDI-1/PM	PDI-1/LA	SRXB/SC*	OGC	PDI-1/(A)SC
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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. 199

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 PPL Susquehanna, LLC, dated May 31, 2001, as supplemented by letter dated December 5, 2001, 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. 199 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 upon startup following the Unit 1 twelfth refueling and inspection outage.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Joel T. Munday, Acting 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: January 31, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 199

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

2.0-1

INSERT

2.0-1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 199 TO FACILITY OPERATING LICENSE NO. NPF-14
PPL SUSQUEHANNA, LLC
ALLEGHENY ELECTRIC COOPERATIVE, INC.
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1
DOCKET NO. 50-387

1.0 INTRODUCTION

By letter dated May 31, 2001, as supplemented December 5, 2001, PPL Susquehanna, LLC, (PPL, the licensee) proposed changes to the Technical Specifications (TSs) for the Susquehanna Steam Electric Station, Unit 1 (SSES-1), Cycle 13 (U1C13) operation. The proposed changes would revise the minimum critical power ratio (MCPR) safety limits for ATRIUM-10 fuel. The December 5, 2001, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination or expand the amendment beyond the scope of the initial notice.

2.0 EVALUATION

The licensee proposed to revise TS 2.1.1, "Reactor Core SLs [safety limits]." Specifically, the licensee proposed to change the MCPR safety limits of TS 2.1.1.2 from 1.11 to 1.12 for two-recirculation loop operation with the reactor steam dome pressure ≥ 785 psig and core flow ≥ 10 million lb_m/hr.

The U1C13 core has 764 fuel assemblies, of which there are 316 fresh ATRIUM-10 bundles, 256 once-burned ATRIUM-10 bundles, and 192 twice-burned ATRIUM-10 bundles. The proposed TS change is also to support a 1.4% power uprate for U1C13 (3493 Mwt versus 3441 Mwt for U1C12) operation. This power uprate for SSES-1 was previously approved by Amendment No. 194 dated July 6, 2001, to the SSES-1 license. The licensee's calculations to support the proposed change to the MCPR safety limits conservatively assumed a 1.5% power uprate.

The licensee described the approved methodologies used to calculate the MCPR safety limit value for the proposed TS change in the submittal. The U1C13 MCPR safety limit analysis was performed by Framatone-ANP using SSES-1 plant- and cycle-specific fuel and core parameters including power profiles provided by PPL; and, NRC approved methods including ANF-524 (P)(A), Revision 2, and Supplement 1, Revision 2, and EMF-1997 (P)(A), Revision 0 and Supplement 1, Revision 0.

The NRC staff has reviewed the justification contained in the application and supplement for the MCPR safety limit value of 1.12 for two-recirculation loop operation using the approach stated in TS 5.6.5.b. Based on our review of the application and the supplement to the application, the staff has concluded that the MCPR safety limit analysis for U1C13 operation using the plant- and cycle-specific calculation in conjunction with the approved methods is acceptable. The U1C13 MCPR safety limit will ensure that 99.9% of the fuel rods in the core will not experience boiling transition, which satisfies the requirements of Generic Design Criterion 10 of Appendix A to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, regarding acceptable fuel-design limit. The staff has concluded that the justification for analyzing and determining the MCPR safety limit value of 1.12 for two-recirculation loop operation for U1C13 is acceptable. The staff is planning to perform an on-site audit on the detailed calculation for the MCPR safety limit.

2.1 Summary

Based on its review, the NRC staff concludes that the proposed revision to TS 2.1.1.2 is acceptable for SSES-1, Cycle 13 operation.

3.0 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.

4.0 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 (66 FR 46480). 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.

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

Principal Contributor: T. Huang

Date: January 31, 2002