

Mr. Robert G. Byram
Senior Vice President-Generation
and Chief Nuclear Officer
PP&L, Inc.
2 North Ninth Street
Allentown, PA 18101

July 7, 1999

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENT RE: EMERGENCY DIESEL GENERATOR STORAGE TANK
CAPACITY - (TAC NOS. MA4271 AND MA4272)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 183 to Facility Operating License No. NPF-14 and Amendment No. 157 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 your application dated November 23, 1998.

These amendments modify the SSES, Units 1 and 2, TS limiting condition for operation, 3.8.3, and surveillance requirement, 3.8.3.1, to increase the minimum fuel oil storage tank volume ranges.

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

Sincerely,

ORIGINAL SIGNED BY:

Victor Nerses, Sr. 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.183 to
License No. NPF-14
2. Amendment No.157 to
License No. NPF-22
3. Safety Evaluation

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NAME	VNerses/rs1	MO'Brien	RWeisman	JCaTve	SBajwa	
DATE	06/15/99	06/11/99	06/25/99	06/16/99	07/1/99	

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SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENT NOS. 183 AND 157 RE: EMERGENCY DIESEL GENERATOR STORAGE
TANK CAPACITY - (TAC NOS. MA4271 AND MA4272)

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 7, 1999

Mr. Robert G. Byram
Senior Vice President-Generation
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SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 - ISSUANCE OF
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Sincerely,

A handwritten signature in cursive script, reading "Victor Nerses", is positioned above the typed name.

Victor Nerses, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-387 and 50-388

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cc w/encls: See next page

Susquehanna Steam Electric Station,
Units 1 & 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PP&L, INC.

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 183
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., dated November 23, 1998, 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.

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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. 183 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L 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 after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



S. Singh Bajwa, Chief, Section I
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 7, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 183

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

3.8-20

3.8-22

INSERT

3.8-20

3.8-22

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LC0 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

NOTE

Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level in associated storage tank < 47,570 gallons and > 41,018 gallons for DG A-D; < 60,480 gallons and > 52,340 gallons for DG E.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately
C. One or more DGs with stored fuel oil total particulates not within limits.	C.1 Restore stored fuel oil total particulates to within limits.	7 days

(continued)

ACTIONS (continued)
SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.3.1	Verify each fuel oil storage tank contains ≥ 47,570 gallons for DG A-D; ≥ 60,480 gallons for DG E.	31 days
SR 3.8.3.2	Verify lube oil sump level is visible in the sight glass.	31 days
SR 3.8.3.3	Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4	-----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is ≥ 240 psig.	31 days
SR 3.8.3.5	Check for and remove accumulated water from each fuel oil storage tank.	31 days



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

PP&L, INC.

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 157
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 the PP&L, Inc., dated November 23, 1998, 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.

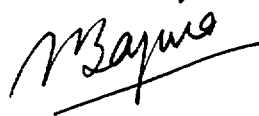
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-22 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 157 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PP&L 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 after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



S. Singh Bajwa, Chief, Section I
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 7, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 157

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

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

REMOVE

3.8-23

3.8-25

INSERT

3.8-23

3.8-25

3.8 ELECTRICAL POWER SYSTEMS

3.8.3 Diesel Fuel Oil, Lube Oil, and Starting Air

LCO 3.8.3 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for each required diesel generator (DG).

APPLICABILITY: When associated DG is required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each DG.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more DGs with fuel oil level in associated storage tank < 47,570 gallons and > 41,018 gallons for DG A-D; < 60,480 gallons and > 52,340 gallons for DG E.	A.1 Restore fuel oil level to within limits.	48 hours
B. One or more DGs with lube oil sump level not visible in the sight glass.	B.1 Declare associated DG inoperable.	Immediately

(continued)

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.8.3.1 Verify each fuel oil storage tank contains $\geq 47,570$ gallons for DG A-D; $\geq 60,480$ gallons for DG E.	31 days
SR 3.8.3.2 Verify lube oil sump level is visible in the sight glass.	31 days
SR 3.8.3.3 Verify fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.8.3.4 -----NOTE----- Not required to be met when DG is operating. ----- Verify each DG air start receiver pressure is ≥ 240 psig.	31 days
SR 3.8.3.5 Check for and remove accumulated water from each fuel oil storage tank.	31 days



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. NPF-14
AMENDMENT NO. 157 TO FACILITY OPERATING LICENSE NO. NPF-22

PP&L, INC.

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 388

1.0 INTRODUCTION

By letter dated November 23, 1998, PP&L, Inc. (the licensee) submitted a request for changes to the Susquehanna Steam Electric Station, Units 1 and 2 (SSES), Technical Specifications (TSs). The requested changes would modify the SSES TS limiting condition for operation (LCO), 3.8.3, and surveillance requirement (SR), 3.8.3.1, to increase the minimum fuel oil storage tank (FOST) volume ranges. Currently, the specified minimum usable fuel oil volume range is <44,900 gallons and >38,600 gallons for the diesel generators (DGs). These values were adopted with the implementation of the Improved Technical Specifications (ITS) for SSES that were based upon NUREG-1433, "Standard Technical Specifications General Electric Plants BWR/4." Subsequent to the implementation of the ITS for SSES, the licensee identified that the FOST capacity requirements, which were based on the post design basis accident (DBA) DG load profile, were less conservative than the capacity required for previous plant-specific TSs, which were based upon the continuous DG ratings. The licensee stated in its November 23, 1998, submittal that administrative controls were implemented to require the larger volumes until the proposed TSs are issued.

2.0 EVALUATION

The safety function of the EDG FOST is to supply the emergency diesel generators (EDGs) with enough fuel to ensure the availability of necessary power to engineered safety features systems so that fuel, reactor coolant, and containment system design limits are not exceeded in the event of a loss of offsite power. The current FOST volume as specified in the Susquehanna TS is based on the EDG DBA load profile.

The proposed FOST volumes are based on EDG continuous rated load ratings that are calculated in accordance with the American National Standards Institute (ANSI) Standard N195-1976. Specifically, the TSs for A.C. electrical power systems include a requirement that the FOST for the EDGs shall contain a certain quantity of usable fuel oil during operation (TS 3.8.3). There are five tanks, one for each of the five DGs. The basis for this specification is that each of the five tanks will contain sufficient usable fuel oil to operate the associated DG for 7

days following a loss-of-coolant accident at maximum continuous load conditions.

Currently, the specified minimum usable fuel oil volume range is <44,900 gallons and >38,600 gallons for the DGs. These values were adopted with the implementation of the ITS. Subsequent to the implementation of the ITS for SSES, the licensee identified that the FOST capacity requirements (based on the post DBA EDG load profile) were less conservative than the previous plant-specific TSs.

The proposed capacity requirements for the FOST are based upon the EDG continuous load ratings and are calculated in accordance with ANSI N195-1976, as described in the SSES Final Safety Analysis Report, Section 9.5.4. The proposed FOST level range in LCO 3.8.3, Condition A, is <47,570 gallons and >41,018 gallons for DGs A, B, C, and D. The range level for DG E is increased to <60,480 gallons and >52,340 gallons. The upper limits are calculated from the 7-day fuel oil consumption at the continuous DG ratings plus the unusable volume in the FOST. The lower limits for DG equal 6/7 of the 7-day fuel oil consumption at the continuous DG ratings plus the unusable volume in each FOST.

The required minimum volume is the minimum amount of fuel oil needed to operate a DG for 7 days in response to any DBA. The volume needed for the FOST was increased due to the application of the methodology in ANSI Standard N195-1976. As stated in Section C of Regulatory Guide 1.137, "Fuel-Oil Systems for Standby Diesel Generators," a 7-day fuel oil supply and the methodology in the above ANSI Standard are an acceptable basis for determining the minimum volume of DG fuel oil. The licensee stated that it used the continuous name plate rating method of the ANSI Standard and assumed a DG operates for 7 days at its rated continuous load to determine the minimum amount of fuel oil needed.

The proposed FOST range is consistent with the plant's design basis and calculated such that the volume requirements are adequate to support the EDG's post-accident design basis safety function. The proposed changes to the TSs place additional restrictions upon the amount of fuel which must be maintained in each FOST and, therefore, are conservative. Based upon the above evaluation, the Nuclear Regulatory Commission (NRC) staff concludes that the licensee's proposed TS changes to LCO 3.8.3 and SR 3.8.3.1 are acceptable.

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 change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no

public comment on such finding (64 FR 4160). Accordingly, the amendments meet 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 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.

Principal Contributor: B. Mozafari

Date: July 7, 1999