

January 31, 1995

Mr. Robert G. Byram
Senior Vice President-Nuclear
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, PA 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2
(TAC NOS. M90733 & M90734)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 141 to Facility Operating License No. NPF-14 and Amendment No. 111 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station (SSES), Units 1 and 2. These amendments are in response to your letter dated October 25, 1994.

These amendments add to the SSES Unit 1 and 2 Technical Specifications, isolation signals to Table 3.6.3-1 for the containment isolation valves on the sample lines for the containment radiation monitoring and wetwell sample lines. This change is based on the licensee's design change for installation of a new Containment Radiation Monitoring and wetwell sample system.

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

Sincerely,
/s/

Chester Poslusny, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-387/50-388

Enclosures:

1. Amendment No. 141 to License No. NPF-14
2. Amendment No. 111 to License No. NPF-22
3. Safety Evaluation

cc w/encls:
See next page

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JStolz	JWermiel	

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NAME	: MO'Brien	: CPoslusny;rb:	: JWermiel	: RBarrett	: P. Bachmann	: JStolz
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 31, 1995

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

Sincerely,

A handwritten signature in cursive script that reads "Chester Poslusny".

Chester Poslusny, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-387/50-388

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cc w/encls:
See next page

Mr. Robert G. Byram
Pennsylvania Power & Light Company

Susquehanna Steam Electric Station,
Units 1 & 2

cc:

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

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 141
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 the Pennsylvania Power & Light Company, dated October 25, 1994, 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. 141 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 is to be implemented within 30 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



for

John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 31, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 141

FACILITY OPERATING LICENSE NO. NPF-14

DOCKET NO. 50-387

Replace the following pages of the Appendix A Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE

3/4 6-22

3/4 6-28

INSERT

3/4 6-22

3/4 6-28

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

Valve Function and Number	Maximum Isolation Time (Seconds)	Isolation Signal(s) ^(a)
Automatic Isolation Valves (Continued)		
<u>SUPPRESSION POOL CLEANUP^(b)</u>		
HV-15766	30	B,Z
HV-15768	30	B,Z
<u>HPCI VACUUM BREAKER</u>		
HV-155F075	15	LB,Z
HV-155F079	15	LB,Z
<u>RCIC VACUUM BREAKER</u>		
HV-149F062	10	KB,Z
HV-149F084	10	KB,Z
<u>TIP BALL VALVES^(d)</u>		
C51-J004 A,B,C,D,E	5	A,Z
<u>CONTAINMENT RADIATION DETECTION SYSTEM</u>		
SV-157100 A,B	N/A	B,Y
SV-157101 A,B	N/A	B,Y
SV-157102 A,B	N/A	B,Y
SV-157103 A,B	N/A	B,Y
SV-157104	N/A	B,Y
SV-157105	N/A	B,Y
SV-157106	N/A	B,Y
SV-157107	N/A	B,Y
b. <u>MANUAL ISOLATION VALVES MSIV</u>		
<u>LCS BLEED VALVE</u>		
HV-139F001 B,F,K,P		
<u>FEEDWATER^(e)</u>		
HV-141F032 A,B		
<u>RWCU RETURN</u>		
HV-14182 A,B		
<u>RCIC INJECTION</u>		
HV-149F013 1-49-020		

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

NOTATION

- (a) See Specification 3.3.2, Table 3.3.2-1, for isolation signal(s) that operates each automatic isolation valve. All power operated isolation valves may be opened or closed remote-manually.
- (b) Isolation barrier remains water filled or a water seal remains in the line post-LOCA. Isolation valve is tested with water. Isolation valve leakage is not included in 0.60 L_a total Type B and C tests.
- (c) Redundant isolation boundary for this valve is provided by the closed system whose integrity is verified by Type A test.
- (d) Automatic isolation signal causes TIP to retract; ball valve closes when probe is fully retracted.
- (e) Power assisted check valve.



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

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 111
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 Pennsylvania Power & Light Company, dated October 25, 1994, 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.

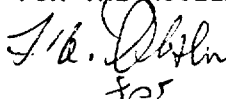
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-22 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 111 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 is to be implemented within 30 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



JFS
John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 31, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. NPF-22

DOCKET NO. 50-388

Replace the following pages of the Appendix A Technical Specifications with enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

REMOVE

INSERT

3/4 6-22

3/4 6-22

3/4 6-28

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HV-255F079	15	LB,Z
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HV-249F084	10	KB,Z
<u>TIP BALL VALVES^(d)</u>		
C51-J004 A,B,C,D,E	5	A,Z
<u>CONTAINMENT RADIATION DETECTION SYSTEM</u>		
SV-257100 A,B	N/A	B,Y
SV-257101 A,B	N/A	B,Y
SV-257102 A,B	N/A	B,Y
SV-257103 A,B	N/A	B,Y
SV-257104	N/A	B,Y
SV-257105	N/A	B,Y
SV-257106	N/A	B,Y
SV-257107	N/A	B,Y
b. <u>MANUAL ISOLATION VALVES</u>		
<u>MSIV-LCS BLEED VALVE</u>		
HV-239F001 B,F,K,P		
<u>FEEDWATER^(e)</u>		
HV-241F032 A,B		
<u>RWCU RETURN</u>		
HV-24182 A,B		
<u>RCIC INJECTION</u>		
HV-249F013		
2-49-020		

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

NOTATION

- (a) See Specification 3.3.2, Table 3.3.2-1, for isolation signal(s) that operates each automatic isolation valve. All power-operated isolation valves may be opened or closed remote-manually.
- (b) Isolation barrier remains water filled or a water seal remains in the line post-LOCA. Isolation valve is tested with water. Isolation valve leakage is not included in 0.60 L_a total Type B and C tests.
- (c) Redundant isolation boundary for this valve is provided by the closed system whose integrity is verified by Type A test.
- (d) Automatic isolation signal causes TIP to retract; ball valve closes when probe is fully retracted.
- (e) Power assisted check valve.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 141 TO FACILITY OPERATING LICENSE NO. NPF-14
AMENDMENT NO. 111 TO FACILITY OPERATING LICENSE NO. NPF-22
PENNSYLVANIA POWER & LIGHT COMPANY
ALLEGHENY ELECTRIC COOPERATIVE, INC.
SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2
DOCKET NOS. 50-387 AND 388

1.0 INTRODUCTION

By letter dated October 25, 1994, the Pennsylvania Power and Light Company (the licensee) submitted a request for changes to the Susquehanna Steam Electric Station, Units 1 and 2, Technical Specifications (TS). The requested changes would add to the SSES Unit 1 and 2 Technical Specifications isolation signals to Table 3.6.3-1 for the containment isolation valves on the sample lines for the containment radiation monitoring (CRM) and wetwell sample lines. This change is based on the licensee's design change for installation of a new CRM and wetwell sample system.

2.0 BACKGROUND

As discussed in the Final Safety Evaluation Report for the SSES units, the Containment Radiation Monitoring system consists of two 100 percent redundant systems that are part of the Reactor Coolant Pressure Boundary (RCPB) Leak Detection System. The CRM (high range) is designed to monitor containment radiation during and after a loss-of-coolant-accident (LOCA) or other accident, provides an alarm of high radiation levels annunciated in the control room, and provides an indication and historical record of radiation during and after an accident. The CRM is not a safety-related system; however, the isolation of the CRM sample lines is part of the containment isolation system which is safety-related. Each CRM system consists of a single cabinet structure containing a particulate monitor, iodine monitor, and noble gas monitor. The CRM share the containment drywell and wetwell piping with the Hydrogen/Oxygen analyzers and Post Accident Sample System (PASS).

3.0 EVALUATION

Because of numerous operational and maintenance problems with the CRM system, PP&L proposes to install a new system and change the sample lines. These changes will provide a more reliable and representative containment air sample with acceptable plate-out limits.

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The proposed modification is to add both a new CRM and wetwell sample system with separate containment sample lines which will replace the existing CRMs. The existing CRMs will be removed from the Containment Atmospheric Control (CAC) sample lines. The new CRM and wetwell sample lines will have inboard isolation valves supplied with Division I control power and the outboard valves are supplied with Division II control power. These redundant power circuits are to be physically and electrically separated. In addition, the control power to the CRM is fed through isolation devices such that failure of the CRM under accident conditions is isolated from the Class 1E systems. The isolation valves can be operated either manually or closed automatically. The valves are closed automatically by their redundant associated LOCA signal. The setpoint for the LOCA signal is either Reactor Vessel Water -Low, Low Level (-38.0 inches) or Drywell Pressure-High(1.72 psig). This LOCA signal is the same signal for the existing CAC isolation valves.

The fail-safe position of the isolation valves is in the closed position. Inadvertent operation which closes an isolation valve to the CRM would be sensed and a low flow or high pump discharge pressure would cause the CRM sample pump to shut down. For the Wetwell Sample Rack, inadvertent closure of isolation valves while a grab sample was being taken would be indicated locally as low flow on a flow indicator at the grab sample rack and requires operator action to turn off the sample pump.

PP&L stated that the isolation valves and all the power and control components have been qualified and indicated that it has analyzed the isolation system and has not identified any single failure which could prevent the isolation function.

The proposed changes to the technical specifications (TS) add isolation signals to Table 3.6.3-1 for the containment isolation valves on the sample lines for the CRM and wetwell sample lines and removes Note f (Solenoid valves not capable of being opened due to the absence of permanently installed electrical power.) from the table. This change governs the operability of the primary containment isolation valves for the sample lines to the new CRMs and wetwell sample rack by establishing the maximum isolation time. Such a requirement ensures that the containment atmosphere is isolated from outside environment following a release of radioactive material to the containment atmosphere or following the pressurization of the containment. Since the licensee has indicated that the new isolation valves are solenoid valves which immediately close upon receipt of an accident signal, the staff finds that their design is consistent with GDC 54-57 of 10 CFR Part 50, Appendix A.

PP&L has evaluated this modification to assure that the proposed changes do not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety.

The staff agrees with the licensee's evaluation.

4.0 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.

5.0 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. 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 (59 FR 63126). Accordingly, the amendments meet 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.

6.0 CONCLUSION

PP&L has proposed a design for the CRM and wetwell sample line isolation which meets the requirements of the safety-related containment isolation system and is equal to or is an improvement in the design of the systems which are currently installed at the plant. The staff has evaluated the PP&L proposed change to the CRM and wetwell sample system and the TS and finds these changes acceptable.

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 Contributors: F. Paulitz
C. Poslusny

Date: January 31, 1995