December 6, 1989

Docket Nos. 50-387/388

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Mr. Harold W. Keiser
Senior Vice President-Nuclear
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Dear Mr. Keiser:

SUBJECT: TECHNICAL SPECIFICATION CHANGES TO PERMIT TEMPORARY RELIEF FROM DIFFERENTIAL TEMPERATURE SYSTEM OPERABILITY REQUIREMENT (TAC NOS. 75116/75117)

RE: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

The Commission has issued the enclosed Amendment No. 94 to Facility Operating License No. NPF-14 and Amendment No. 61 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station, Units 1 and 2. These amendments are in response to your letter dated October 19, 1989.

These amendments have been prepared and issued on an emergency basis to provide a one time temporary (three months) relief from the operability requirement of differential temperature instrumentation of the leakage detection system.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance and Final Determination of No Significant Hazards Consideration and Opportunity for Hearing will be included in the Commission's Biweekly Federal Register Notice.

Sincerely,

/S/

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 94 to License No. NPF-14
2. Amendment No. 61 to License No. NPF-22
3. Safety Evaluation

cc w/enclosures:
See next page

[75116/7]

PDI-2/LA	PDI-2/PM	PDI-2/D	ADRI	OGC
MO'Brien	MThadani:mj	WButler	BBoger	RAJ
11/ /89	11/16/89	11/16/89	11/4/89	11/22/89

Publish FR notice

CP-1

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

December 6, 1989

Docket Nos. 50-387/388

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Senior Vice President-Nuclear
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

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SUBJECT: TECHNICAL SPECIFICATION CHANGES TO PERMIT TEMPORARY RELIEF FROM DIFFERENTIAL TEMPERATURE SYSTEM OPERABILITY REQUIREMENT (TAC NOS. 75116/75117)

RE: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

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Office of Nuclear Reactor Regulation

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cc w/enclosures:
See next page

cc:

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

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. 94
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 19, 1989 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. 94 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 was effective on October 20, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 6, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 94

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. The overleaf pages are provided to maintain document completeness.*

REMOVE	INSERT
3/4 3-11	3/4 3-11*
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
3/4 3-14	3/4 3-14
3/4 3-17	3/4 3-17*
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-23	3/4 3-23*
3/4 3-24	3/4 3-24
3/4 3-25	3/4 3-25
3/4 3-26	3/4 3-26

TABLE 3.3.2-1

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(s)[(a)]	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level				
1) Low, Level 3	A	2	1, 2, 3	20
2) Low Low, Level 2	B	2	1, 2, 3	20
3) Low Low Low, Level 1	X	2	1, 2, 3	20
b. Drywell Pressure - High	Y,Z,X	2	1, 2, 3	20
c. Manual Initiation	NA	1	1, 2, 3	24
d. SGTS Exhaust Radiation-High	R	1	1, 2, 3,4***,5***	20
e. Main Steam Line Radiation-High	C	2	1, 2, 3	20
2. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low, Level 2	**	2	1, 2, 3 and *	25
b. Drywell Pressure - High	**	2	1, 2, 3	25
c. Refuel Floor High Exhaust Duct Radiation - High	**	2	*	25
d. Railroad Access Shaft Exhaust Duct Radiation - High	**	1	*	25
e. Refuel Floor Wall Exhaust Duct Radiation - High	**	2	*	25
f. Manual Initiation	NA	1	1, 2, 3 and *	24

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(s)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
3. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level - Low, Low, Low, Level 1	X	2	1, 2, 3	21
b. Main Steam Line Radiation - High	C	2	1, 2, 3	21
c. Main Steam Line Pressure - Low	P	2	1	22
d. Main Steam Line Flow - High	D	2/line	1, 2, 3	20
e. Condenser Vacuum - Low	UA	2	1, 2, 3	21
f. Reactor Building Main Steam Line Tunnel Temperature - High	E	2	1, 2, 3	21
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	E	2	1, 2, 3	21*
h. Manual Initiation	NA	1	1, 2, 3	24
i. Turbine Building Main Steam Line Tunnel Temperature-High	E	2	1, 2, 3	21
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. RWCU Δ Flow - High	J	1	1, 2, 3	23
b. RWCU Area Temperature - High	W	3	1, 2, 3	23
c. RWCU Area Ventilation Δ Temp. - High	W	3	1, 2, 3	23*
d. SLCS Initiation	I	2	1, 2, 3	23
e. Reactor Vessel Water Level - Low Low, Level 2	B	2	1, 2, 3	23
f. RWCU Flow - High	J	1	1, 2, 3	23
g. Manual Initiation	NA	1	1, 2, 3	24

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(s)[a]	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Δ Pressure - High	K	1	1, 2, 3	23
b. RCIC Steam Supply Pressure - Low	KB	2	1, 2, 3	23
c. RCIC Turbine Exhaust Diaphragm Pressure - High	K	2	1, 2, 3	23
d. RCIC Equipment Room Temperature - High	K	1	1, 2, 3	23
e. RCIC Equipment Room Δ Temperature - High	K	1	1, 2, 3	23*
f. RCIC Emergency Area Cooler Temperature - High	K	1	1, 2, 3	23
g. RCIC Pipe Routing Area Δ Temperature - High	K	1	1, 2, 3	23*
h. RCIC Pipe Routine Area Temperature - High	K	1	1, 2, 3	23
i. Manual Initiation	NA	1	1, 2, 3	24
j. Drywell Pressure - High	Z	2	1, 2, 3	23

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(s)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Δ Pressure - High	L	1	1, 2, 3	23
b. HPCI Steam Supply Pressure-Low	LB	2	1, 2, 3	23
c. HPCI Turbine Exhaust Diaphragm Pressure - High	L	2	1, 2, 3	23
d. HPCI Equipment Room Temperature - High	L	1	1, 2, 3	23
e. HPCI Equipment Room Δ Temperature - High	L	1	1, 2, 3	23
f. HPCI Emergency Area Cooler Temperature - High	L	1	1, 2, 3	23
g. HPCI Pipe Routing Area Temperature - High	L	1	1, 2, 3	23
h. HPCI Pipe Routine Area Δ Temperature - High	L	1	1, 2, 3	23*
i. Manual Initiation	NA	1	1, 2, 3	24
j. Drywell Pressure - High	Z	2	1, 2, 3	23

*This trip function need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date:
October 20, 1989
Amendment No. 94

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. PRIMARY CONTAINMENT ISOLATION		
a. Reactor Vessel Water Level		
1) Low, Level 3	≥ 13.0 inches*	≥ 11.5 inches
2) Low Low, Level 2	≥ -38.0 inches*	≥ -45.0 inches
3) Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. Manual Initiation	NA	NA
d. SGTS Exhaust Radiation - High	≤23.0 mR/hr	≤31.0 mR/Hr
e. Main Steam Line Radiation - High	≤ 7.0 x full power background	≤8.4 x full power background
2. SECONDARY CONTAINMENT ISOLATION		
a. Reactor Vessel Water Level - Low Low, Level 2	≥ -38.0 inches*	≥ -45.0 inches
b. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
c. Refuel Floor High Exhaust Duct Radiation - High	≤ 2.5 mR/hr.	≤ 4.0 mR/hr.
d. Railroad Access Shaft Exhaust Duct Radiation - High	≤ 2.5 mR/hr.	≤ 4.0 mR/hr.
e. Refuel Floor Wall Exhaust Duct Radiation - High	≤ 2.5 mR/hr.	≤ 4.0 mR/hr.
f. Manual Initiation	NA	NA
3. MAIN STEAM LINE ISOLATION		
a. Reactor Vessel Water Level - Low Low Low, Level 1	≥ -129 inches*	≥ -136 inches
b. Main Steam Line Radiation - High	≤ 7.0 X full power background	≤ 8.4 X full power background
c. Main Steam Line Pressure - Low	≥ 861 psig	≥ 841 psig
d. Main Steam Line Flow - High	≤ 107 psid	≤ 110 psid

Amendment No. 82
AUG 30 1988

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
MAIN STEAM LINE ISOLATION (Continued)		
e. Condenser Vacuum - Low	≥ 9.0 inches Hg vacuum	≥ 8.8 inches Hg vacuum
f. Reactor Building Main Steam Line Tunnel Temperature - High	≤ 177°F	≤ 184°F
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	≤ 99°F	≤ 108°F*
h. Manual Initiation	NA	NA
i. Turbine Building Main Steam Line Tunnel Temperature-High	≤177°F	≤184°F
4. REACTOR WATER CLEANUP SYSTEM ISOLATION		
a. RWCU Δ Flow - High	≤ 60 gpm	≤ 80 gpm
b. RWCU Area Temperature - High	≤ 147°F or 118.3°F#	≤ 154°F or 125.3°F#
c. RWCU/Area Ventilation Δ Temperature - High	≤ 69°F or 35.3°F#	≤ 78°F or 44.3°F#*
d. SLCS Initiation	NA	NA
e. Reactor Vessel Water Level - Low Low, Level 2	≥ -38 inches*	≥ -45 inches
f. RWCU Flow - High	≤ 426 gpm	≤ 436 gpm
g. Manual Initiation	NA	NA
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION		
a. RCIC Steam Line Δ Pressure - High	≤ 177" H_2O	< 189" H_2O
b. RCIC Steam Supply Pressure - Low	≥ 60 psig	≥ 53 psig
c. RCIC Turbine Exhaust Diaphragm Pressure - High	≤ 10.0 psig	≤ 20.0 psig

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION Continued)		
d. RCIC Equipment Room Temperature - High	≤ 167°F**	≤ 174°F**
e. RCIC Equipment Room Δ Temperature - High	≤ 89°F	≤98°F*
f. RCIC Pipe Routing Area Temperature - High	≤ 167°F##	≤ 174°F##
g. RCIC Pipe Routing Area Δ Temperature - High	≤ 89°F##	≤ 98°F##*
h. RCIC Emergency Area Cooler Temperature - High	≤ 147°F	≤ 154°F
i. Manual Initiation	NA	NA
j. Drywell Pressure - High	≤1.72 psig	≤1.88 psig
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION		
a. HPCI Steam Line Flow - High	≤ 350 inches H_2O	≤ 367 inches H_2O
b. HPCI Steam Supply Pressure - Low	≥ 104 psig	≥ 90 psig
c. HPCI Turbine Exhaust Diaphragm Pressure - High	≤ 10 psig	≤ 20 psig
d. HPCI Equipment Room Temperature - High	≤ 167°F	≤ 174°F
e. HPCI Equipment Room Δ Temperature - High	≤ 89°F	≤ 98°F
f. HPCI Emergency Area Cooler Temperature - High	≤ 147°F	≤154°F
g. HPCI Pipe Routing Area Temperature - High	≤ 167°F##	≤ 174°F##

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION		TRIP SETPOINT	ALLOWABLE VALUE
h.	HPCI Pipe Routing Area Δ Temperature - High	≤ 89°F##	≤ 98°F##**
i.	Manual Initiation	NA	NA
j.	Drywell Pressure - High	≤1.72 psig	≤1.88 psig
7.	RHR SYSTEM SHUTDOWN COOLING/HEAD SPRAY MODE ISOLATION		
a.	Reactor Vessel Water Level - Low, Level 3	≥ 13.0 inches*	≥ 11.5 inches
b.	Reactor Vessel (RHR Cut-in Permissive) Pressure - High	≤ 98 psig	≤ 108 psig
c.	RHR Equipment Area Δ Temperature - High	≤ 89°F	≤ 90.5°F
d.	RHR Equipment Area Temperature - High	≤ 167°F	≤ 170.5°F
e.	RHR Flow - High	≤ 25,000 gpm	≤ 26,000 gpm
f.	Manual Initiation	NA	NA
g.	Drywell Pressure - High	≤1.72 psig	≤1.88 psig

*See Bases Figure B 3/4 3-1.

#Lower setpoints for TSH-G33-1N600 E, F and TDSH-G33-1N602 E, F.

##15 minute time delay.

**This trip function need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level -				
1) Low, Level 3	S	M	R	1, 2, 3
2) Low Low, Level 2	S	M	R	1, 2, 3
3) Low Low Low, Level 1	S	M	R	1, 2, 3
b. Drywell Pressure - High	NA	M	R	1, 2, 3
c. Manual Initiation	NA	R	NA	1, 2, 3
d. SGTS Exhaust Radiation - High	S	M	R	1, 2, 3, 4***, 5***
e. Main Steam Line Radiation - High	S	M	R	1, 2, 3
2. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3 and *
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Refuel Floor High Exhaust Duct Radiation - High	S	M	R	*
d. Railroad Access Shaft Exhaust Duct Radiation - High	S	M	R	*
e. Refuel Floor Wall Exhaust Duct Radiation - High	S	M	R	*
f. Manual Initiation	NA	R	NA	1, 2, 3 and *

SEP

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
3. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level - Low, Low Low, Level 1	S	M	R	1, 2, 3
b. Main Steam Line Radiation - High	S	M	R	1, 2, 3
c. Main Steam Line Pressure - Low	NA	M	Q	1
d. Main Steam Line Flow - High	S	M	R	1, 2, 3
e. Condenser Vacuum - Low	NA	M	Q	1, 2**, 3**
f. Reactor Building Main Steam Line Tunnel Temperature - High	NA	M	Q	1, 2, 3
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	NA	M	Q	1, 2, 3*
h. Manual Initiation	NA	R	NA	1, 2, 3
i. Turbine Building Main Steam Line Tunnel Temperature - High	NA	M	Q	1, 2, 3
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. RWCU Δ Flow - High	S	M	R	1, 2, 3
b. RWCU Area Temperature - High	NA	M	Q	1, 2, 3
c. RWCU Area Ventilation Δ Temperature - High	NA	M	Q	1, 2, 3*
d. SLCS Initiation	NA	R	NA	1, 2, 3
e. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3
f. RWCU Flow - High	S	M	R	1, 2, 3
g. Manual Initiation	NA	R	NA	1, 2, 3

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Δ Pressure - High	NA	M	Q	1, 2, 3
b. RCIC Steam Supply Pressure - Low	NA	M	Q	1, 2, 3
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA	M	Q	1, 2, 3
d. RCIC Equipment Room Temperature - High	NA	M	Q	1, 2, 3
e. RCIC Equipment Room Δ Temperature - High	NA	M	Q	1, 2, 3*
f. RCIC Pipe Routing Area Temperature - High	NA	M	Q	1, 2, 3
g. RCIC Pipe Routing Area Δ Temperature - High	NA	M	Q	1, 2, 3*
h. RCIC Emergency Area Cooler Temperature - High	NA	M	Q	1, 2, 3
i. Manual Initiation	NA	R	NA	1, 2, 3
j. Drywell Pressure - High	NA	M	R	1, 2, 3
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Δ Pressure - High	NA	M	Q	1, 2, 3
b. HPCI Steam Supply Pressure - Low	NA	M	Q	1, 2, 3
c. HPCI Turbine Exhaust Diaphragm Pressure - High	NA	M	Q	1, 2, 3

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION (Continued)				
d. HPCI Equipment Room Temperature - High	NA	M	Q	1, 2, 3
e. HPCI Equipment Room Δ Temperature - High	NA	M	Q	1, 2, 3
f. HPCI Emergency Area Cooler Temperature - High	NA	M	Q	1, 2, 3
g. HPCI Pipe Routing Area Temperature - High	NA	M	Q	1, 2, 3
h. HPCI Pipe Routing Area Δ Temperature - High	NA	M	Q	1, 2, 3****
i. Manual Initiation	NA	R	NA	1, 2, 3
j. Drywell Pressure - High	NA	M	R	1, 2, 3
7. RHR SYSTEM SHUTDOWN COOLING/HEAD SPRAY MODE ISOLATION				
a. Reactor Vessel Water Level - Low, Level 3	S	M	R	1, 2, 3
b. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	NA	M	Q	1, 2, 3
c. RHR Equipment Area Δ Temperature - High	NA	M	Q	1, 2, 3
d. RHR Equipment Area Temperature - High	NA	M	Q	1, 2, 3
e. RHR Flow - High	S	M	R	1, 2, 3
f. Manual Initiation	NA	R	NA	1, 2, 3
g. Drywell Pressure - High	NA	M	R	1, 2, 3

* When handling irradiated fuel in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.
** When reactor steam dome pressure > 1043 psig and/or any turbine stop valve is open.
*** When VENTING or PURGING the drywell per Specification 3.11.2.8.
**** This trip function need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 94

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

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. 61
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 19, 1989 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. 61 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 was effective on October 20, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 6, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 61

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. The overleaf pages are provided to maintain document completeness.*

REMOVE	INSERT
3/4 3-11	3/4 3-11*
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
3/4 3-14	3/4 3-14
3/4 3-17	3/4 3-17*
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20*
3/4 3-23	3/4 3-23*
3/4 3-24	3/4 3-24
3/4 3-25	3/4 3-25
3/4 3-26	3/4 3-26

TABLE 3.3.2-1

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(S)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level				
1) Low, Level 3	A	2	1, 2, 3	20
2) Low Low, Level 2	B	2	1, 2, 3	20
3) Low Low Low, Level 1	X	2	1, 2, 3	20
b. Drywell Pressure - High	Y,Z	2	1, 2, 3	20
c. Manual Initiation	NA	1	1, 2, 3	24
d. SGTS Exhaust Radiation - High	R	1	1, 2, 3, 4***, 5***	20
e. Main Steam Line Radiation - High	C	2	1, 2, 3	20
2. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low, Level 2	**	2	1, 2, 3 and *	25
b. Drywell Pressure - High	**	2	1, 2, 3	25
c. Refuel Floor High Exhaust Duct Radiation - High	**	2	*	25
d. Railroad Access Shaft Exhaust Duct Radiation - High	**	1	*	25
e. Refuel Floor Wall Exhaust Duct Radiation - High	**	2	*	25
f. Manual Initiation	NA	1	1, 2, 3 and *	24

Amendment No. 50
AUG 30 1988

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(S)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
3. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level - Low Low Low, Level 1	X	2	1, 2, 3	21
b. Main Steam Line Radiation - High	C	2	1, 2, 3	21
c. Main Steam Line Pressure - Low	P	2	1	22
d. Main Steam Line Flow - High	D	2/line	1, 2, 3	20
e. Condenser Vacuum - Low	UA	2	1, 2, 3	21
f. Reactor Building Main Steam Line Tunnel Temperature - High	E	2	1, 2, 3	21
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	E	2	1, 2, 3	21*
h. Manual Initiation	NA	1	1, 2, 3	24
i. Turbine Building Main Steam Line Tunnel Temperature - High	E	2	1, 2, 3	21
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. RWCU Δ Flow - High	J	1	1, 2, 3	23
b. RWCU Area Temperature - High	W	3	1, 2, 3	23
c. RWCU Area Ventilation Δ Temperature - High	W	3	1, 2, 3	23*
d. SLCS Initiation	I	2	1, 2, 3	23
e. Reactor Vessel Water Level - Low Low, Level 2	B	2	1, 2, 3	23
f. RWCU Flow - High	J	1	1, 2, 3	23
g. Manual Initiation	NA	1	1, 2, 3	24

*These trip functions need not be OPERABLE from October 19, 1989 to January 1, 1990.

Effective Date: October 20, 1989
Amendment No. 61

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(S)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Δ Pressure -High	K	1	1, 2, 3	23
b. RCIC Steam Supply Pressure - Low	KB	2	1, 2, 3	23
c. RCIC Turbine Exhaust Diaphragm Pressure - High	K	2	1, 2, 3	23
d. RCIC Equipment Room Temperature - High	K	1	1, 2, 3	23
e. RCIC Equipment Room Δ Temperature - High	K	1	1, 2, 3	23*
f. RCIC Pipe Routing Area Temperature - High	K	1	1, 2, 3	23
g. RCIC Pipe Routing Area Δ Temperature - High	K	1	1, 2, 3	23*
h. RCIC Emergency Area Cooler Temperature - High	K	1	1, 2, 3	23
i. Manual Initiation	NA	1	1, 2, 3	24
j. Drywell Pressure - High	Z	2	1, 2, 3	23

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 61

TABLE 3.3.2-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION

TRIP FUNCTION	ISOLATION SIGNAL(S)(a)	MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (b)	APPLICABLE OPERATIONAL CONDITION	ACTION
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Δ Pressure - High	L	1	1, 2, 3	23
b. HPCI Steam Supply Pressure-Low	LB	2	1, 2, 3	23
c. HPCI Turbine Exhaust Diaphragm Pressure - High	L	2	1, 2, 3	23
d. HPCI Equipment Room Temperature - High	L	1	1, 2, 3	23
e. HPCI Equipment Room Δ Temperature - High	L	1	1, 2, 3	23
f. HPCI Emergency Area Cooler Temperature - High	L	1	1, 2, 3	23
g. HPCI Pipe Routing Area Temperature - High	L	1	1, 2, 3	23
h. HPCI Pipe Routing Area Δ Temperature - High	L	1	1, 2, 3	23*
i. Manual Initiation	NA	1	1, 2, 3	24
j. Drywell Pressure - High	Z	2	1, 2, 3	23

*This trip function need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 61

TABLE 3.3.2-2

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. PRIMARY CONTAINMENT ISOLATION		
a. Reactor Vessel Water Level		
1) Low, Level 3	$\geq$13.0 inches*	$\geq$ 11.5 inches
2) Low Low, Level 2	$\geq$ -38.0 inches*	$\geq$ -45.0 inches
3) Low Low Low, Level 1	$\geq$ -129 inches*	$\geq$ -136 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. Manual Initiation	NA	NA
d. SGTS Exhaust Radiation - High	$\leq$ 23.0 mR/hr	$\leq$ 31.0 mR/hr
e. Main Steam Line Radiation - High	$\leq$ 7.0 X full power background	$\leq$ 8.4 X full power background
2. SECONDARY CONTAINMENT ISOLATION		
a. Reactor Vessel Water Level - Low Low, Level 2	$\geq$ -38.0 inches*	$\geq$ -45.0 inches
b. Drywell Pressure - High	$\leq$ 1.72 psig	$\leq$ 1.88 psig
c. Refuel Floor High Exhaust Duct Radiation - High	$\leq$ 2.5 mR/hr	$\leq$ 4.0 mR/hr |
d. Railroad Access Shaft Exhaust Duct Radiation - High	$\leq$ 2.5 mR/hr	$\leq$ 4.0 mR/hr |
e. Refuel Floor Wall Exhaust Duct Radiation - High	$\leq$ 2.5 mR/hr	$\leq$ 4.0 mR/hr |
f. Manual Initiation	NA	NA
3. MAIN STEAM LINE ISOLATION		
a. Reactor Vessel Water Level - Low Low Low, Level 1	$\geq$ -129 inches*	$\geq$ -136 inches
b. Main Steam Line Radiation - High	$\leq$ 7.0 X full power background	$\leq$ 8.4 X full power background
c. Main Steam Line Pressure - Low	$\geq$ 861 psig	$\geq$ 841 psig
d. Main Steam Line Flow - High	$\leq$ 107 psid	$\leq$ 110 psid

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
MAIN STEAM LINE ISOLATION (Continued)		
e. Condenser Vacuum - Low	> 9.0 inches Hg vacuum	> 8.8 inches Hg vacuum
f. Reactor Building Main Steam Line Tunnel Temperature - High	≤ 177°F	≤ 184°F
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	≤ 99°F	≤ 108°F*
h. Manual Initiation	NA	NA
i. Turbine Building Main Steam Line Tunnel Temperature - High	< 177°F	≤ 184°F
4. REACTOR WATER CLEANUP SYSTEM ISOLATION		
a. RWCU Δ Flow - High	≤ 60 gpm	< 80 gpm
b. RWCU Area Temperature - High	< 147°F or 118.3°F#	< 154°F or 125.3°F#
c. RWCU/Area Ventilation Δ Temperature - High	≤ 69°F or 35.3°F#	≤ 78°F or 44.3°F#*
d. SLCS Initiation	NA	NA
e. Reactor Vessel Water Level - Low Low, Level 2	≥ -38 inches*	> -45 inches
f. RWCU Flow - High	≤ 426 gpm	< 436 gpm
g. Manual Initiation	NA	NA
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION		
a. RCIC Steam Line Δ Pressure - High	< 153" H_2O	≤ 165" H_2O
b. RCIC Steam Supply Pressure - Low	≥ 60 psig	≥ 53 psig
c. RCIC Turbine Exhaust Diaphragm Pressure - High	≤ 10.0 psig	≤ 20.0 psig

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date:
October 20, 1989
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TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION (Continued)		
d. RCIC Equipment Room Temperature - High	≤ 167°F	≤ 174°F
e. RCIC Equipment Room Δ Temperature - High	≤ 89°F	≤ 98°F*
f. RCIC Pipe Routing Area Temperature - High	≤ 167°F##	≤ 174°F##
g. RCIC Pipe Routing Area Δ Temperature - High	≤ 89°F##	≤ 98°F##*
h. RCIC Emergency Area Cooler Temperature - High	≤ 147°F	≤ 154°F
i. Manual Initiation	NA	NA
j. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION		
a. HPCI Steam Line Flow - High	≤ 275 inches H_2O	≤ 292 inches H_2O
b. HPCI Steam Supply Pressure - Low	≥ 104 psig	≥ 90 psig
c. HPCI Turbine Exhaust Diaphragm Pressure - High	≤ 10 psig	≤ 20 psig
d. HPCI Equipment Room Temperature - High	≤ 167°F	≤ 174°F
e. HPCI Equipment Room Δ Temperature - High	≤ 89°F	≤ 98°F
f. HPCI Emergency Area Cooler Temperature - High	≤ 147°F	≤ 154°F
g. HPCI Pipe Routing Area Temperature - High	≤ 167°F##	≤ 174°F##
h. HPCI Pipe Routing Area Δ Temperature - High	≤ 89°F##	≤ 98°F##*
i. Manual Initiation	NA	NA
j. Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989

Amendment No. 61

TABLE 3.3.2-2 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SETPOINTS

TRIP FUNCTION		TRIP SETPOINT	ALLOWABLE VALUE
7.	RHR SYSTEM SHUTDOWN COOLING/HEAD SPRAY MODE ISOLATION		
a.	Reactor Vessel Water Level - Low, Level 3	≥ 13.0 inches*	≥ 11.5 inches
b.	Reactor Vessel (RHR Cut-in Permissive) Pressure - High	≤ 98 psig	≤ 108 psig
c.	RHR Equipment Area Δ Temperature - High	≤ 89°F	≤ 90.5°F
d.	RHR Equipment Area Temperature - High	≤ 167°F	≤ 170.5°F
e.	RHR Flow - High	≤ 25,000 gpm	≤ 26,000 gpm
f.	Manual Initiation	NA	NA
g.	Drywell Pressure - High	≤ 1.72 psig	≤ 1.88 psig

*See Bases Figure B 3/4 3-1.

#Lower setpoints for TSH-G33-2N600 E, F and TDSH-G33-2N602 E, F.

##15 minute time delay.

Amendment No. 51
OCT 2 0 1988

TABLE 4.3.2.1-1

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. PRIMARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level -				
1) Low, Level 3	S	M	R	1, 2, 3
2) Low Low, Level 2	S	M	R	1, 2, 3
3) Low Low Low, Level 1	S	M	R	1, 2, 3
b. Drywell Pressure - High	NA	M	R	1, 2, 3
c. Manual Initiation	NA	R	NA	1, 2, 3
d. SGTS Exhaust Radiation - High	S	M	R	1, 2, 3, 4***, 5***
e. Main Steam Line Radiation - High	S	M	R	1, 2, 3
2. SECONDARY CONTAINMENT ISOLATION				
a. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3 and *
b. Drywell Pressure - High	NA	M	Q	1, 2, 3
c. Refuel Floor High Exhaust Duct Radiation - High	S	M	R	*
d. Railroad Access Shaft Exhaust Duct Radiation - High	S	M	R	*
e. Refuel Floor Wall Exhaust Duct Radiation - High	S	M	R	*
f. Manual Initiation	NA	R	NA	1, 2, 3 and *

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
3. MAIN STEAM LINE ISOLATION				
a. Reactor Vessel Water Level - Low Low Low, Level 1	S	M	R	1, 2, 3
b. Main Steam Line Radiation - High	S	M	R	1, 2, 3
c. Main Steam Line Pressure - Low	NA	M	Q	1
d. Main Steam Line Flow - High	S	M	R	1, 2, 3
e. Condenser Vacuum - Low	NA	M	Q	1, 2**, 3**
f. Reactor Building Main Steam Line Tunnel Temperature - High	NA	M	Q	1, 2, 3
g. Reactor Building Main Steam Line Tunnel Δ Temperature - High	NA	M	Q	1, 2, 3*
h. Manual Initiation	NA	R	NA	1, 2, 3
i. Turbine Building Main Steam Line Tunnel Temperature - High	NA	M	Q	1, 2, 3
4. REACTOR WATER CLEANUP SYSTEM ISOLATION				
a. RWCU Δ Flow - High	S	M	R	1, 2, 3
b. RWCU Area Temperature - High	NA	M	Q	1, 2, 3
c. RWCU Area Ventilation Δ Temperature - High	NA	M	Q	1, 2, 3*
d. SLCS Initiation	NA	R	NA	1, 2, 3
e. Reactor Vessel Water Level - Low Low, Level 2	S	M	R	1, 2, 3
f. RWCU Flow - High	S	M	R	1, 2, 3
g. Manual Initiation	NA	R	NA	1, 2, 3

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
5. REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION				
a. RCIC Steam Line Δ Pressure - High	NA	M	Q	1, 2, 3
b. RCIC Steam Supply Pressure - Low	NA	M	Q	1, 2, 3
c. RCIC Turbine Exhaust Diaphragm Pressure - High	NA	M	Q	1, 2, 3
d. RCIC Equipment Room Temperature - High	NA	M	Q	1, 2, 3
e. RCIC Equipment Room Δ Temperature - High	NA	M	Q	1, 2, 3*
f. RCIC Pipe Routing Area Temperature - High	NA	M	Q	1, 2, 3
g. RCIC Pipe Routing Area Δ Temperature - High	NA	M	Q	1, 2, 3*
h. RCIC Emergency Area Cooler Temperature - High	NA	M	Q	1, 2, 3
i. Manual Initiation	NA	R	NA	1, 2, 3
j. Drywell Pressure - High	NA	M	R	1, 2, 3
6. HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION				
a. HPCI Steam Line Δ Pressure - High	NA	M	Q	1, 2, 3
b. HPCI Steam Supply Pressure - Low	NA	M	Q	1, 2, 3
c. HPCI Turbine Exhaust Diaphragm Pressure - High	NA	M	Q	1, 2, 3

*These trip functions need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 61

TABLE 4.3.2.1-1 (Continued)

ISOLATION ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
HIGH PRESSURE COOLANT INJECTION SYSTEM ISOLATION (Continued)				
d. HPCI Equipment Room Temperature - High	NA	M	Q	1, 2, 3
e. HPCI Equipment Room Δ Temperature - High	NA	M	Q	1, 2, 3
f. HPCI Emergency Area Cooler Temperature - High	NA	M	Q	1, 2, 3
g. HPCI Pipe Routing Area Temperature - High	NA	M	Q	1, 2, 3
h. HPCI Pipe Routing Area Δ Temperature - High	NA	M	Q	1, 2, 3****
i. Manual Initiation	NA	R	NA	1, 2, 3
j. Drywell Pressure - High	NA	M	R	1, 2, 3
7. RHR SYSTEM SHUTDOWN COOLING/HEAD SPRAY MODE ISOLATION				
a. Reactor Vessel Water Level - Low, Level 3	S	M	R	1, 2, 3
b. Reactor Vessel (RHR Cut-in Permissive) Pressure - High	NA	M	Q	1, 2, 3
c. RHR Equipment Area Δ Temperature - High	NA	M	Q	1, 2, 3
d. RHR Equipment Area Temperature - High	NA	M	Q	1, 2, 3
e. RHR Flow - High	S	M	R	1, 2, 3
f. Manual Initiation	NA	R	NA	1, 2, 3
g. Drywell Pressure - High	NA	M	R	1, 2, 3

*When handling irradiated fuel in the secondary containment and during CORE ALTERATIONS and operations with a potential for draining the reactor vessel.
**When reactor steam dome pressure > 1043 psig and/or any turbine stop valve is open.
***When VENTING or PURGING the drywell per Specification 3.11.2.8.
****This trip function need not be OPERABLE from October 19, 1989 to January 19, 1990.

Effective Date: October 20, 1989
Amendment No. 61

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 94 TO FACILITY OPERATING LICENSE NO. NPF-14 AND

AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. NPF-22

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NOS. 50-387 AND 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

1.0 INTRODUCTION

By letter dated October 19, 1989, Pennsylvania Power & Light Company requested an amendment to Facility Operating License Nos. NPF-14 and NPF-22 for the Susquehanna Steam Electric Station, Units 1 and 2, requested that certain requirements of Technical specifications (TS) be eliminated on a one time basis for a period of three months. Specifically, the licensee requested relief from the operability of differential temperature sensing systems in Table 3.2.2 items 3g, 4c, 5e, 5g and 6h. The differential temperature instruments are located in the RCIC and RWCU equipment room, the HPCI/RCIC piping area and in the main steam tunnel. These instruments initiate an isolation signal on detection of steam leaks at a predetermined differential temperature.

The licensee indicated that in the course of performing RCIC room steam leak temperature profile and pressure transient studies, it was found that the backdraft isolation dampers (BDID's), which isolate the room ventilation on high differential pressure between the room and the atmosphere, would actuate first. This would render the differential temperature sensing instrumentation located in the ducts inoperable. A similar configuration also was found to exist in the RWCU equipment room, the main steam tunnel and in the HPCI/RCIC piping area.

2.0 EVALUATION

The licensee has stated that in addition to differential temperature instrumentation, the Susquehanna Units 1 and 2 have other safety-related diverse and redundant instrumentation systems which can detect leaks and cause automatic isolation of the affected systems.

For relatively small leaks in reactor coolant pressure boundary in RCIC, automatic isolation will be provided by high ambient room temperature and high room cooler inlet temperature. For large breaks, automatic isolation will be

provided by RCIC high steam flow, low steam supply pressure and high steam turbine exhaust vent pressure. In addition to automatic isolation, other instruments provide alarms which are indications of reactor coolant boundary leaks. For RCIC room, these are high ambient and high area cooler inlet temperature, high area radiation, room flood detection and backdraft isolation damper closure.

The other affected systems by this change have similar levels of diverse and redundant methods for detecting, alarming and automatically isolating steam leaks. Additionally, the operator will be directed that the receipt of the pertinent alarms is indicative of a pressure boundary leak.

The staff has reviewed the licensee's basis as summarized. For small leaks, automatic isolation is provided by high ambient temperature in all areas. Some diversity in automatic isolation for small leaks would be lost due to inoperability of the differential temperature instruments. However, this would be compensated by early backdraft isolation dampers closure alarm and directive to the operator that receipt of this alarm is indicative of a pressure boundary leak. With another diverse indication of a steam leak, the operator will manually isolate the system. The licensee has also committed to maintain the differential temperature instruments as described in the Technical Specification. Based on the above, the staff considers the requested relief for a period of three months acceptable.

The staff concludes that the licensee's request for relief from the operability requirements of differential temperature monitors for a period of three months from October 19, 1989 to January 19, 1990 is acceptable. However, the staff requires and the licensee has committed to continue to maintain the differential temperature instrumentation as required in the Technical Specification. The licensee's commitment is documented in a letter dated October 24, 1989.

3.0 EMERGENCY BASIS

In its October 19, 1989 letter, the licensee has shown that under the current plant configuration the differential temperature sensing system for leakage detection in RCIC and RWCU equipment rooms, main steam tunnel, and HPCI/RCIC piping area would have to be declared inoperable and the actions of Technical Specification 3.2.2 invoked. Those actions require that each affected system be isolated. In the case of main steam tunnel, the action would result in shutdown of both units. Therefore, the requirement of 10 CFR 50.91 that "failure to act in a timely way would result in derating or shutdown of a nuclear unit" is satisfied.

A second requirement of 10 CFR 50.91 to support an application for Technical Specification changes on emergency basis states that the licensee "... explain why this emergency situation occurred and why it could not avoid the situation..." The discovery of the design problem which puts the differential

temperature instrumentation in an non-operable condition was a result of an extensive effort by the licensee to analyze the steam leak detection and isolation system. As a result of that effort the licensee discovered that the original design of the system was inherently incompatible with the operability requirements. As soon as the design inconsistency was discovered, the licensee contacted the NRC to initiate a request for relief from Technical Specification requirements to avoid shutting down both the nuclear units.

The staff agrees with the licensee's basis for an emergency and finds that the proposed Technical Specification changes be processed on an emergency basis.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The staff has reviewed the licensee's request and concurs with the following basis and conclusions provided by the licensee in its September 14, 1987 submittal.

I. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Susquehanna is provided with many diverse and redundant methods of detecting, alarming, and automatically isolating systems which interface with the reactor coolant pressure boundary when a leak is detected in one of these systems. The systems being discussed herein are RCIC, Reactor Water Cleanup (RWCU), HPCI and the Main Steam Line.

Redundancy in automatic isolation for relatively small leaks in the reactor coolant pressure boundary is provided in each case by multiple high room ambient temperature sensors. RCIC is also provided with automatic isolation for area cooler inlet high temperature and HPCI/RCIC piping area high temperature. Other types of signals which cause automatic system isolations for the larger break accident scenario include high steamline flow, low steam inlet pressure, and high turbine exhaust diaphragm pressure for HPCI and RCIC; high differential flow, high flow, and low reactor water level for RHR; and low reactor water level, high main steam line flow, and low condenser vacuum for the main steam line.

In addition to the automatic isolations mentioned above, other instruments provide operators with alarms which are indications of a reactor coolant pressure boundary leak in these rooms. Pre-isolation

alarms are provided for high room ambient and high area cooler inlet temperature where applicable. Other types of alarms which alert operators to an abnormal condition related to a steam leak in a particular room include high area radiation, room flood detection, room fire detection and backdraft isolation damper closure.

There are diverse and redundant methods available for detection, alarming, and automatic isolation of a reactor coolant pressure boundary leak in secondary containment. Elimination of differential temperature monitoring does not in any way significantly reduce this capability.

II. Create the possibility of a new or different kind of accident from any previously evaluated.

Based on the analysis presented in Item I above, the elimination of differential temperature monitoring does not significantly affect the ability to detect and isolate leaks in secondary containment. Therefore the proposed action does not create the possibility for a new or different type of accident from any previously evaluated.

III. Involve a significant reduction in the margin of safety.

The proposed action, while reducing the number of specific loops acting to isolate a leak as measured by a thermal condition, does not measurably change the probability of successful leak detection of that condition and isolation of the leak. Therefore the margin of safety is not reduced.

5.0 STATE CONSULTATION

The Commonwealth of Pennsylvania was consulted on October 25, 1989, and they had no comment on these Amendments.

6.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The staff has determined that these 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 made a final no significant hazards finding with respect to these Amendments. Accordingly, these 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 nor environmental assessment need be prepared in connection with the issuance of these amendments.

7.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) the amendment does not (a) significantly increase the probability or consequences of an accident previously evaluated, (b) increase the possibility of a new or different kind of accident from any previously evaluated or (c) significantly reduce a safety margin and, therefore, the amendment does not involve significant hazards consideration; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

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