

BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

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In the Matter of :  
PENNSYLVANIA POWER & : Docket No. 50-387  
LIGHT COMPANY

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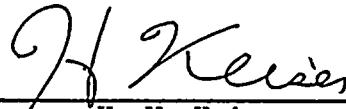
PROPOSED AMENDMENT NO. 127  
FACILITY OPERATING LICENSE NO. NPF-14  
SUSQUEHANNA STEAM ELECTRIC STATION  
UNIT NO. 1

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Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 127 to its Facility Operating License No. NPF-14 dated July 17, 1982.

This amendment contains a revision to the Susquehanna SES Unit 1 Technical Specifications.


PENNSYLVANIA POWER & LIGHT COMPANY  
BY:



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H. W. Keiser  
Senior Vice President - Nuclear

Sworn to and subscribed before me  
this 26<sup>th</sup> of January, 1990.

  
Notary Public

NOTARIAL SEAL  
Helen J. Woelfer, Notary Public  
City of Allentown, Lehigh County, Pa.  
My Commission Expires Apr. 4, 1993

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BEFORE THE  
UNITED STATES NUCLEAR REGULATORY COMMISSION

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In the Matter of :  
PENNSYLVANIA POWER & : Docket No. 50-388  
LIGHT COMPANY

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PROPOSED AMENDMENT NO. 79  
FACILITY OPERATING LICENSE NO. NPF-22  
SUSQUEHANNA STEAM ELECTRIC STATION  
UNIT NO. 2

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Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 79 to its Facility Operating License No. NPF-22 dated March 23, 1984.

This amendment contains a revision to the Susquehanna SES Unit 2 Technical Specifications.

PENNSYLVANIA POWER & LIGHT COMPANY  
BY:



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H. W. Keiser  
Senior Vice President - Nuclear

Sworn to and subscribed before me  
this *26th* of *January*, 1990.



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Notary Public  
Helen J. Wolter, Notary Public  
City of Allentown, Lehigh County, Pa.  
My Commission Expires Apr. 4, 1993



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## I. RCIC PUMP ROOM LEAK DETECTION

## A. Differential Temperature Isolation Signal

Item 5e Technical Specification Table 3.3.2.1

## B. Isolation Valves - RCIC Steam Supply

HV-149F007	Inboard isolation valve
HV-149F008	Outboard isolation valve
HV-149F088	Inboard isolation valve bypass

## C. Alternate Isolation Functions

## 1. Ambient Temperature High

TSH-E51-1N600A	Closes outboard valve
TSH-E51-1N600B	Closes inboard valves

## 2. Room Cooler Inlet Temperature High

TSH-E51-1N602A	Closes outboard valve
TSH-E51-1N602B	Closes inboard valves

## 3. Steam Flow (DP) High

PDIS-E51-1N017	Closes outboard valve
PDIS-E51-1N018	Closes inboard valves

## 4. Steam Supply Pressure Low

PSL-E51-1N019A	Both switches must actuate to close outboard valve
PSL-E51-1N019C	

PSL-E51-1N019B	Both switches must actuate to close inboard valves
PSL-E51-1N019D	

## 5. Turbine Exhaust Vent Pressure High\*

PSL-E51-1N012A	Both switches must actuate to close outboard valve
PSL-E51-1N012C	

PSL-E51-1N012B	Both switches must actuate to close inboard valves
PSL-E51-1N012D	

\* Not leak detection, but will isolate the system.



## II. MAIN STEAM TUNNEL LEAK DETECTION

## A. Differential Temperature Isolation Signal

Item 3g Technical Specification Table 3.3.2.1

## B. Isolation Valves

## Main Steam Isolation Valves

HV-141F022 A	Inboard isolation valve line A
HV-141F022 B	Inboard isolation valve line B
HV-141F022 C	Inboard isolation valve line C
HV-141F022 D	Inboard isolation valve line D
HV-141F028 A	Outboard isolation valve line A
HV-141F028 B	Outboard isolation valve line B
HV-141F028 C	Outboard isolation valve line C
HV-141F028 D	Outboard isolation valve line D

## Main Steam Line Drain Valves

HV-141F016	Inboard isolation valve
HV-141F019	Outboard isolation valve

## C. Alternate Isolation Functions

All MSIV isolation logic is based on four instrumentation trip channels (A, B, C, D) which are separated into two electrical divisions. Two trip channels are assigned to each division (A&C-Div I and B&D-Div II). At least one out of the two channels must actuate to generate an isolation signal and both divisions must generate an isolation signal to close the MSIV's. This is "one out of two, taken twice" logic.

## 1. Ambient Temperature High - Reactor Building

TSH-B21-1N600A  
TSH-B21-1N600B  
TSH-B21-1N600C  
TSH-B21-1N600D

## 2. Ambient Temperature High - Turbine Building

TSH-10100A  
TSH-10100B  
TSH-10100C  
TSH-10100D

3. Reactor Vessel Water Level Low-Low-Low (Level 1)

LITS-B21-1N026A  
LITS-B21-1N026B  
LITS-B21-1N026C  
LITS-B21-1N026D

4. Steam Flow (DP) High

FIS-B21-1N006A	Main Steam Line A
FIS-B21-1N006B	Main Steam Line A
FIS-B21-1N006C	Main Steam Line A
FIS-B21-1N006D	Main Steam Line A
FIS-B21-1N007A	Main Steam Line B
FIS-B21-1N007B	Main Steam Line B
FIS-B21-1N007C	Main Steam Line B
FIS-B21-1N007D	Main Steam Line B
FIS-B21-1N008A	Main Steam Line C
FIS-B21-1N008B	Main Steam Line C
FIS-B21-1N008C	Main Steam Line C
FIS-B21-1N008D	Main Steam Line C
FIS-B21-1N009A	Main Steam Line D
FIS-B21-1N009B	Main Steam Line D
FIS-B21-1N009C	Main Steam Line D
FIS-B21-1N009D	Main Steam Line D

There are four, divisionalized high steam flow channels per main steam line. An isolation signal developed from any one of the four main steam lines will isolate all of the lines.

5. Steam Line Pressure Low

PSL-B21-1N015A  
PSL-B21-1N015B  
PSL-B21-1N015C  
PSL-B21-1N015D

6. Main Steam Line Radiation High\*

RIS-D12-1K603A  
RIS-D12-1K603B  
RIS-D12-1K603C  
RIS-D12-1K603D

7. Condenser Vacuum Low\*

PSH-B21-1N056A  
PSH-B21-1N056B  
PSH-B21-1N056C  
PSH-B21-1N056D

\* Not leak detection, but will isolate the system





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## III. REACTOR WATER CLEAN UP EQUIPMENT ROOMS

## A. Differential Temperature Isolation Signal

Item 4c Technical Specification Table 3.3.2.1

## B. Isolation Valves - RWCU Suction

HV-144F001	Inboard isolation valve
HV-144F004	Outboard isolation valve

## C. Alternate Isolation Functions

## 1. Ambient Temperature High

TSH-G33-1N600A	Pump Room 502
TSH-G33-1N600B	Pump Room 503
TSH-G33-1N600C	Heat Exchanger Room 504
TSH-G33-1N600D	Heat Exchanger Room 505
TSH-G33-1N600E	Penetration Room 501
TSH-G33-1N600F	Penetration Room 501

Instrument A or C or E will close the inboard valve.  
Instrument B or D or F will close the outboard valve.

## 2. Reactor Vessel Water Level Low, Low (Level 2)

LITS-B21-1N026A	Both switches must actuate to close the inboard valve
LITS-B21-1N026B	

LITS-B21-1N026C	Both switches must actuate to close the outboard valve
LITS-B21-1N026D	

## 3. Flow (DP) High

PDIS-G33-1N044A	Closes inboard valve
PDIS-G33-1N044B	Closes outboard valve

## 4. Differential Flow High

FDSH-G33-1N603A	Closes inboard valve
FDSH-G33-1N603B	Closes outboard valve

## IV. RCIC/HPCI PIPING AREA LEAK DETECTION

## A. Differential Temperature Isolation Signals

Technical Specification Table 3.3.2.1 Item 5g and 6h

## B. Isolation Valves

RCIC Steam Supply - SEE SECTION I.B  
HPCI Steam Supply - SEE SECTION V.B

## C. Alternate Isolation Functions

## Ambient Temperature High

TSH-E51-1N603A	Closes outboard RCIC valve
TSH-E51-1N603B	Closes inboard RCIC valves
TSH-E51-1N603C	Closes inboard HPCI valves
TSH-E51-1N603D	Closes outboard HPCI valve

## V. HPCI PUMP ROOM LEAK DETECTION

## A. Differential Temperature Isolation Signal

Item 6e Technical Specification Table 3.3.2.1

## B. Isolation Valves - HPCI Steam Supply

HV-155F002	Inboard isolation valve
HV-155F003	Outboard isolation valve
HV-155F100	Inboard isolation valve bypass

## C. Alternate Isolation Functions

## 1. Ambient Temperature High

TSH-E41-1N600A	Closes inboard valves
TSH-E41-1N600B	Closes outboard valve

## 2. Room Cooler Inlet Temperature High

TSH-E41-1N602A	Closes inboard valves
TSH-E41-1N602B	Closes outboard valve

## 3. Steam Flow (DP) High

PDIS-E41-1N004	Closes inboard valves
PDIS-E41-1N005	Closes outboard valve

## 4. Steam Supply Pressure Low

PSL-E41-1N001A	Both switches must actuate to close outboard valve
PSL-E41-1N001C	

PSL-E41-1N001B	Both switches must actuate to close inboard valves
PSL-E41-1N001D	

## 5. Turbine Exhaust Vent Pressure High\*

PSL-E41-1N012A	Both switches must actuate to close outboard valve
PSL-E41-1N012C	

PSL-E41-1N012B	Both switches must actuate to close inboard valves
PSL-E41-1N012D	

\* Not leak detection, but will isolate the system



VI. RHR PUMP ROOM LEAK DETECTION

A. Differential Temperature Isolation Signal

Item 7c Technical Specification Table 3.3.2.1

B. Isolation Valves

RHR Shutdown Cooling Suction

HV-151F008	Inboard isolation valve
HV-151F009	Outboard isolation valve

RHR Reactor Vessel Head Spray

HV-151F022	Inboard isolation valve
HV-151F023	Outboard isolation valve

C. Alternate Isolation Functions

1. Ambient Temperature High - Pump Room 13,103

TSH-E11-1N600A	One switch must actuate to close the inboard valves
TSH-E11-1N600B	

Ambient Temperature High - Pump Room 14,104

TSH-E11-1N600C	One switch must actuate to close the outboard valves
TSH-E11-1N600D	

2. Flow High

PDIS-E11-1N019A	Closes the inboard valves
PDIS-E11-1N019B	Closes the outboard valves

3. Reactor Vessel Water Level Low (Level 3)

LIS-B21-1N024A	Both switches must actuate to close the inboard valves
LIS-B21-1N024B	

LIS-B21-1N024C	Both switches must actuate to close the outboard valves
LIS-B21-1N024D	

ATTACHMENT 2 - STEAM LEAK DETECTION ALARM SIGNALS

Page 1 of 2

I. RCIC PUMP ROOM LEAK DETECTION ALARMS

- A. Common High Temperature Alarm (Room Ambient, Cooler Inlet, Piping Area Ambient)

TRS-G33-1N604

- B. Fire Detection High Temperature Alarms

TSH-12242B1

TSH-12242B2

- C. Room Flood Detection High Level Alarm

LSH-14940

- D. Area Radiation High Alarm

RIT-13702

II. MAIN STEAM TUNNEL LEAK DETECTION

- A. Common High Temperature Alarm (Ambient)

TRS-G33-1N604

III. REACTOR WATER CLEAN UP EQUIPMENT ROOMS

- A. Common High Temperature Alarm (Ambient)

TRS-G33-1N604

- B. Area Radiation High Alarm

RIT-13708

IV. HPCI/RCIC PIPE ROUTING AREA

- A. Common High Temperature Alarm (Room Ambient, Cooler Inlet, Piping Area Ambient)

TRS-G33-1N604 (See sections I.A and V.A)

V. HPCI PUMP ROOM LEAK DETECTION

- A. Common High Temperature Alarm (Room Ambient, Cooler Inlet, Piping Area Ambient)

TRS-G33-1N604

ATTACHMENT 2 - STEAM LEAK DETECTION ALARM SIGNALS  
Page 2 of 2

B. Fire Detection High Temperature Alarms

TSH-12242 A1  
TSH-12242 A2

C. Room Flood Detection High Level Alarm

LSH-15640

D. Area Radiation High Alarm

RIT-13703

VI. RHR PUMP ROOM LEAK DETECTION

A. Common High Temperature Alarm

TRS-G33-1N604

B. Room Flood Detection High Level Alarm

LSH-15140A  
LSH-15140B

C. Area Radiation High Alarm

RIT-13701  
RIT-13725