



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

FEB 15 1985

Docket No.: 50-387

Mr. Norman W. Curtis
Vice President
Engineering and Construction - Nuclear
Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Dear Mr. Curtis:

SUBJECT: AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE NO. NPF-14,
SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 32 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station, Unit 1. The amendment is in response to your letter dated September 7, 1984. This amendment supports modifications involving the installation of overcurrent relays on each reactor recirculation pump circuit breaker in order to provide redundant overcurrent protection for the primary containment penetration conductors.

A copy of the related safety evaluation supporting Amendment No. 32 to Facility Operating License NPF-14 is enclosed.

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer".

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosures:

1. Amendment No. 32 to NPF-14
2. Safety Evaluation

cc w/enclosures:
See next page

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cc w/enclosures:

See next page

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JGray
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ASchwencer
01/31/85

AD:DL
TNovak
02/13/85

*with notes to
corrections to
amendment
notice*

Susquehanna

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Susquehanna

cc: Governor's Office of State Planning & Development
Attn: Coordinator, State Clearinghouse
P O. Box 1323
Harrisburg, Pennsylvania 17120

Mr. Bruce Thomas, President
Board of Supervisors
R. D. #1
Berwick, Pennsylvania 18603

U. S. Environmental Protection Agency
Attn: EIS Coordinator
Region III Office
Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106



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. 32
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 September 7, 1984, 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. 32, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facilities in accordance with the Technical Specifications and the Environmental Protection Plan.

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3. This amendment is effective upon start-up following the first refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: FEB 15 1985

3. This amendment is effective upon start-up following the first refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by:

A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: FEB 15 1985

DL:LB#2
M. Cagnone:pob
01/21/85

DL:LB#2
E. Sten
01/21/85

DL:LB#2
ASchwencer
01/21/85

*with notes
corrections to
amendment
& notice*
OELD
J. Gray
01/21/85

DL:ADL
TNovak
01/21/85

ATTACHMENT TO LICENSE AMENDMENT NO. 32
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 8-23
3/4 8-24

3/4 8-27
3/4 8-28

INSERT

3/4 8-23
3/4 8-24

3/4 8-27
3/4 8-28

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

The measured response time will be compared to the manufacturer's data to insure that it is less than or equal to a value specified by the manufacturer. Circuit breakers found inoperable during functional testing shall be restored to OPERABLE status prior to resuming operation. For each circuit breaker found inoperable during these functional tests, an additional representative sample of at least 10% of all the circuit breakers of the inoperable type shall also be functionally tested until no more failures are found or all circuit breakers of that type have been functionally tested.

2. By selecting and functionally testing a representative sample of each type of fuse on a rotating basis. Each representative sample of fuses shall include at least 10% of all fuses of that type. The functional test shall consist of a non-destructive resistance measurement test which demonstrates that the fuse meets its manufacturer's design criteria. Fuses found inoperable during these functional testing shall be replaced with OPERABLE fuses prior to resuming operation. For each fuse found inoperable during these functional tests, an additional representative sample of at least 10% of all fuses of that type shall be functionally tested until no more failures are found or all fuses of that type have been functionally tested.
 3. Functionally testing each overcurrent relay listed in Table 3.8.4.1-1. Testing of these relays shall consist of injecting a current in excess of 120% of the nominal relay initiation current and measuring the response time. The measured response time shall be within $\pm 10\%$ of the specified value.
- b. At least once per 60 months by subjecting each circuit breaker to an inspection and preventive maintenance in accordance with procedures prepared in conjunction with its manufacturer's recommendations.

TABLE 3.8.4.1-1

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>CIRCUIT BREAKER LOCATION</u>	<u>TYPE*</u>	<u>FRAME RATING/UL</u>	<u>TRIP SET POINT (Amperes)</u>	<u>RESPONSE TIME (Milli- seconds/ Cycles)</u>	<u>SYSTEMS OR EQUIPMENT POWERED</u>
a. <u>Type 2 Molded Case Circuit Breakers</u> [#]					
1. 1B219022	HFB-M	150/30	270	NA	HVB311F031A RRP "A" DSCH VLV
2. 1B237043	HFB-M	150/30	270	NA	HVB311F023A Recirc. PP "A" Suction
3. 1B236052	HFB-M	150/30	215	NA	HVE111F009 RHR Pump Suction Shutoff
4. 1B236023	HFB-M	150/3	18	NA	HV12603 Containment Inst. Compressor Suct. Iso. Valve
5. 1B236011	HFB-M	150/30	250	NA	1V413A - Drywell Area Unit Cooler
6. 1B236033	HFB-M	150/30	220	NA	1V414A - Drywell Area Unit Cooler
7. 1B236021	HFB-M	150/30	175	NA	1V417A - Drywell Area Unit Cooler
8. 1B236032	HFB-M	150/30	180	NA	1V412A - Drywell Area Unit Cooler
9. 1B236042	HFB-M	150/30	150	NA	1V411A - Drywell Area Unit Cooler
10. 1B236043	HFB-M	150/30	160	NA	1V416A - Drywell Area Unit Cooler
11. 1B236082	HFB-M	150/30	150	NA	1V415A - Drywell Area Unit Cooler
12. 1B236102	HFB-M	150/3	8	NA	HVB211F001 - Reactor Head Vent Valve
13. 1B236053	HFB-M	150/5	45	NA	HVG331F001 - Reac. Wtr. Clean up inboard isolation
14. 1B237072	HFB-M	150/5	25	NA	HVB211F016 - Main Stm. Line Drain Inboard Isolation
15. 1B219023	HFB-M	150/10	80	NA	HVB311F032A - RRP "A" Dsch Byps Vlv

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>CIRCUIT BREAKER LOCATION</u>	<u>TYPE**</u>	<u>FRAME RATING/UL</u>	<u>RESPONSE TIME (Milli- seconds/ Cycles)</u>	<u>SYSTEMS OR EQUIPMENT POWERED</u>
b. <u>Type 3 Molded Case Circuit Breakers</u>				
1. 1B236103	KB-TM	250/150	NA	1E440C - Containment Recomb Elect. Htr. Ass'y.
2. 1B246033	KB-TM	250/150	NA	1E440D - Containment Recomb Elect. Htr. Ass'y.
3. 1B226103	KB-TM	250/150	NA	1E440B - Containment Recomb Elect. Htr. Ass'y.
4. 1B216092	KB-TM	250/150	NA	1E440A - Containment Recomb. Elect. Htr. Ass'y.
5. 1B253041	KB-TM	150/15	NA	TBB15 Pri. Cont. MSIV Iso. Hoist
6. 1B263021	KB-TM	150/15	NA	TBB16 Pri. Cont. MSIV Iso. Hoist
c. <u>Circuit Breakers Tripped By Overcurrent Relays</u>				
<u>Relay Type</u>	<u>Relay Type</u>	<u>Relay Initiation Current (Amperes)</u>	<u>Response Time (Seconds)</u>	<u>Systems or Equipment Powered</u>
1. 1A20501	50D	5	80	1 P401A Reactor Recirc Pump
2. 1A20502	50D	5	80	1 P401A Reactor Recirc Pump
3. 1A20601	50D	5	80	1 P401B Reactor Recirc Pump
4. 1A20602	50D	5	80	1 P401B Reactor Recirc Pump

**KB-TM - Westinghouse Type KB, Thermal-magnetic

ELECTRICAL POWER SYSTEMS

MOTOR OPERATED VALVES THERMAL OVERLOAD PROTECTION

LIMITING CONDITION FOR OPERATION

3.8.4.2 The thermal overload protection of each valve shown in Table 3.8.4.2-1 shall be bypassed continuously by an OPERABLE bypass device integral with the motor starter.

APPLICABILITY: Whenever the motor operated valve is required to be OPERABLE.

ACTION:

With thermal overload protection for one or more of the above required valves not bypassed continuously by an OPERABLE integral bypass device, take administrative action to continuously bypass the thermal overload within 8 hours or declare the affected valve(s) inoperable and apply the appropriate ACTION statement(s) for the affected system(s).

SURVEILLANCE REQUIREMENTS

4.8.4.2.1 The thermal overload protection for the above required valves shall be verified to be bypassed continuously by an OPERABLE integral bypass device by verifying that the thermal overload protection is bypassed:

- a. At least once per 18 months, and
- b. Following maintenance on the motor starter.

4.8.4.2.2 The thermal overload protection shall be verified to be bypassed following activities during which the thermal overload protection was temporarily placed in force.



UNITED STATES
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WASHINGTON, D. C. 20555

SAFETY EVALUATION

AMENDMENT NO. 32 TO NPF-14

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-387

Introduction

The licensee proposed changes to the Technical Specifications of the operating license for Susquehanna Steam Electric Station, Unit 1 which are as follows:

- 1) to change Technical Specification 4.8.4.1.a by the addition of paragraph 3 to read, "Functionally testing each overcurrent relay listed in Table 3.8.4.1-1. Testing of these relays shall consist of injecting a current in excess of 120% of the nominal relay initiation current and measuring the response time. The measured response time shall be within $\pm 10\%$ of the specified value.", and
- 2) to modify Technical Specification Table 3.8.4.1-1 by the addition of Section C listing the reactor recirculation pump circuit breaker overcurrent relays with their associated specification values.

Evaluation

The licensee's proposal to install overcurrent relays on each Reactor Recirculation pump circuit breaker in order to provide redundant overcurrent protection for the subject penetration is acceptable for the reasons stated below. The phase-to-phase symmetrical fault current produced by the recirculation pump motor generator set was calculated as 6000 amperes. The delay trip for the overcurrent relay was chosen such that it will not interfere with the ATWS trip of the breakers. The existing analysis takes credit for core flow resulting from the coastdown of the combined inertia of the recirculation pump and the motor-generator set until the breaker trip on ATWS. For a small break LOCA, the ATWS trip occurs at 40 seconds according to ATWS system design. The overcurrent relay trip time of the penetration protection devices is 80 seconds to ensure that the overcurrent protective devices will not operate and decouple the inertia of the pump and the MG set. The overcurrent protective devices on each Reactor Recirculation pump circuit breaker are designed to withstand, without interference of the ATWS trip, the maximum available fault current versus time conditions that could occur. This design will protect against failure of a containment penetration given maximum available fault current and a random single failure of a circuit overload protective device. The NRC staff has reviewed the proposed changes and finds them acceptable.

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Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 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 this amendment.

Conclusion

We have 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, and (2) 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 or to the health and safety of the public.

Dated: FEB 15 1965

AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE NO. NPF-14 - SUSQUEHANNA STEAM
ELECTRIC STATION, UNIT 1

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