

Posted

*Amdt. 36
to NPF-22*

June 5, 1987

Docket No. 50-388

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

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Dear Mr. Keiser:

SUBJECT: TECHNICAL SPECIFICATION REVISIONS REGARDING DRYWELL COOLING SYSTEM (TAC NO. 61098)

RE: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

The Commission has issued the enclosed Amendment No. 36 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station (SSES), Unit 2. This amendment is in response to your letter dated March 27, 1986, as revised April 18, 1986, March 2, and April 3, 1987.

In your letter of March 2, 1987, you withdrew part of your April 18, 1986 request related to Unit 1 Technical Specification changes. Accordingly, we have not acted on the Unit 1 portion of your request. Your subsequent letter of April 3, 1987 requested that the Unit 2 changes be approved prior to March 1988 outage and be effective upon startup following that outage. Accordingly, the enclosed amendment has been noted to be effective upon restart following March, 1988 outage.

This amendment revises the SSES Unit 2 Technical Specifications to include operational control on equipment which must be operable to ensure proper functioning of the newly installed drywell cooling fans.

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

Sincerely,

/s/

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 36 to License No. NPF-22
2. Safety Evaluation

cc w/enclosures:
See next page

WAB
PDI-2/D
WButler
6/13/87

MTC
PDI-2/PM
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6/12/87

WB
PDI-2/D
WButler
6/5/87

OGC
6/13/87



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

June 5, 1987

Docket No. 50-388

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

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Sincerely,

Handwritten signature of Walter R. Butler in cursive script.

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 36 to License No. NPF-22
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Harold W. Keiser
Pennsylvania Power & Light Company

Susquehanna Steam Electric Station
Units 1 & 2

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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. 36
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 March 27, 1986, as revised April 18, 1986, March 2, and April 3, 1987, 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. 36 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 upon startup for Cycle 3 operation following a refueling outage scheduled in March, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter ^{/s/}R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 5, 1987

PDI-2/D
WButler
6/2/87

MThadani
PDI-2/PM
MThadani:ca
6/2/87

OFC
C. ...
6/13/87

PDI-2/D
WButler
6/15/87

3

3. This license amendment is effective upon startup for Cycle 3 operation following a refueling outage scheduled in March, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 5, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 36

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

3/4 6-39
3/4 6-40

3/4 8-25
3/4 8-26

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

INSERT

3/4 6-39 (Overleaf)
3/4 6-40

3/4 8-25 (Overleaf)
3/4 8-26

3/4 8-27
3/4 8-28 (Overleaf)

CONTAINMENT SYSTEMS

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

DRYWELL AND SUPPRESSION CHAMBER HYDROGEN RECOMBINER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two drywell and two suppression chamber hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

With one drywell and/or one suppression chamber hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each drywell and suppression chamber hydrogen recombiner system shall be demonstrated OPERABLE:

- a. At least once per 6 months by energizing the recombiner system to at least 10 kw for \geq 5 minutes.
- b. At least once per 18 months by:
 1. Performing a CHANNEL CALIBRATION of all recombiner operating instrumentation and control circuits.
 2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required energization. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.
 3. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure; i.e., loose wiring or structural connections, deposits of foreign materials, etc.

CONTAINMENT SYSTEMS

DRYWELL AIR FLOW SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.2 Drywell unit cooler fans 2V414A&B, 2V416A&B, and recirculation fans 2V418A&B shall be OPERABLE at low speed.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

- a. With one fan in one or more of the above pairs of fans inoperable at low speed, restore the inoperable fan(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With both fans in any pair inoperable at low speed, follow the requirements of Specification 3.0.3.

SURVEILLANCE REQUIREMENTS

4.6.6.2 Each of the fans required above shall be demonstrated OPERABLE at least once per 92 days by:

- a. Starting each fan at low speed from the control room, and
- b. Verifying that each fan operates for at least 15 minutes.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

that current specified by the manufacturer for the test current. The magnetic (instantaneous) element shall be tested by injecting a current in excess of 120% of the pickup value of the magnetic (instantaneous) element and verifying that the circuit breaker trips instantaneously with no intentional time delay. Type HFB-M (magnetic only) circuit breaker testing shall also follow this procedure except that no thermal trip elements will be involved. 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. a. 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, or
- b. By replacing 100% of all required fuses.
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.

*effective upon startup
following the unit's first
refueling outages*

TABLE 3.8.4.1-1

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>CIRCUIT BREAKER</u> <u>DESIGNATION</u>	<u>SYSTEM/EQUIPMENT POWERED</u>
A. <u>Type HFB-TM*</u>	
1. 2B237043	Rx Recirc/HV-B31-2F023A
2. 2B219022	Rx Recirc/HV-B31-2F031A
3. 2B219023	Rx Recirc/HV-B31-2F032A
4. 2B246011	Rx Recirc/HV-B31-2F023B
5. 2B229022	Rx Recirc/HV-B31-2F031B
6. 2B229023	Rx Recirc/HV-B31-2F032B
7. 2B236042	Drywell Air Flow/2V411A
8. 2B236032	Drywell Air Flow/2V412A
9. 2B236011	Drywell Air Flow/2V413A
10. 2B236033	Drywell Air Flow/2V414A
11. 2B236082	Drywell Air Flow/2V415A
12. 2B236043	Drywell Air Flow/2V416A
13. 2B236021	Drywell Air Flow/2V417A
14. 2B236123	Drywell Air Flow/2V418A
15. 2B246091	Drywell Air Flow/2V411B
16. 2B246103	Drywell Air Flow/2V412B
17. 2B246102	Drywell Air Flow/2V413B
18. 2B246061	Drywell Air Flow/2V414B
19. 2B246072	Drywell Air Flow/2V415B
20. 2B246081	Drywell Air Flow/2V416B
21. 2B246051	Drywell Air Flow/2V417B
22. 2B246121	Drywell Air Flow/2V418B

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>CIRCUIT BREAKER DESIGNATION</u>	<u>SYSTEM/EQUIPMENT POWERED</u>
23. 2B236052	RHR/HV-E11-2F009
24. 2B237073	RHR/HV-E11-2F022
25. 2B237082	HPCI/HV-E41-2F002
26. 2B253021	NSSS/HV-B21-2F011A
27. 2B263023	NSSS/HV-B21-2F011B
28. 2B253041	MSIV Hoist/TB0815
29. 2B263021	MSIV Hoist/TB0816
B. <u>Type HFB-M*</u>	
1. 2B236023	Cont. Inst. Gas/HV-22603
2. 2B246022	RCIC/HV-E51-2F007
3. 2B237072	NSSS/HV-B21-2F016
4. 2B236102	NSSS/HV-B21-2F001
5. 2B246112	NSSS/HV-B21-2F002
6. 2B246113	NSSS/HV-B21-2F005
7. 2B236053	RWCU/HV-G33-2F001
8. 2B253053	RWCU/HV-G33-2F102
9. 2B263043	RWCU/HV-G33-2F100
10. 2B263053	RWCU/HV-G33-2F106
11. 2B263081	RWCU/HV-G33-2F101
12. 2B246062	RBCCW/HV-21346
13. 2B246012	RBCCW/HV-21345
14. 2B253063	Drywell Sump/2P402A
15. 2B263071	Drywell Sump/2P402B

TABLE 3.8.4.1-1 (Continued)

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>CIRCUIT BREAKER DESIGNATION</u>	<u>SYSTEM/EQUIPMENT POWERED</u>
16. 2B253043	Drywell Sump/2P403A
17. 2B263072	Drywell Sump/2P403B
C. <u>Type KB-TM</u>	
1. 2B216083 2B216092	Cont. H2 Recombiner/2E440A
2. 2B226102 2B226103	Cont. H2 Recombiner/2E440B
3. 2B236103 2B236121	Cont. H2 Recombiner/2E440C
4. 2B246032 2B246033	Cont. H2 Recombiner/2E440D
D. <u>Circuit Breakers Tripped By Overcurrent Relays</u>	
1. 2A20501 2A20502	Rx Recirc/2P401A
2. 2A20601 2A20602	Rx Recirc/2P401B

*Each circuit breaker designation represents two redundant circuit breakers.

effective upon startup following the unit 2 first refueling outage



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-22

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-388

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

1.0 INTRODUCTION

By letter dated March 27, 1986, as revised April 18, 1986, March 2, and April 3, 1987, , Pennsylvania Power & Light Company (licensee) requested an amendment to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station, Unit 2. The proposed amendment would change the Technical Specifications to support Drywell Cooling System modifications which will enhance the capability of the present drywell cooling system. Similar changes were previously approved for Unit No. 1 in Amendment No. 46 to NPF-14.

The licensee has proposed a change which entails revising the Limiting Condition for Operation reflecting the replacement of the unit cooler subsystem with two recirculation fans. In the modified mode, the unit cooler subsystem will serve the general drywell area and the new recirculation fans will serve the safety-related function of post-LOCA drywell atmosphere mixing. The ACTION statement, Surveillance Requirements, and Table 3.8.4.1-1 will be changed to be consistent with the drywell cooling system modifications.

2.0 EVALUATION

The staff has reviewed the licensee's request and finds that a change, identical to the proposed change to replace the unit cooler subsystem with two recirculation fans, was previously approved for Unit 1 in Amendment No. 46. Since the safety-related operation of the new recirculation fans is the same as that of the unit cooler subsystem being replaced, the proposed change will have no impact on the post-LOCA functions of the subsystem. Therefore, the replacement in the Technical Specifications of the unit cooler subsystem by the new fans is acceptable.

The licensee has proposed to add two pairs of type HFB-TM circuit breakers to Table 3.8.4.1-1, related to primary containment penetration conductor over-current protective devices. Type HFB-TM circuit breakers were analyzed by the licensee in the FSAR. The licensee's analysis demonstrated that electrical power conductors are sized to withstand, without loss of mechanical integrity, the maximum available fault current for sufficiently long periods to allow

backup circuit protection to operate. Therefore, incorporation of two additional previously approved type HFB-TM circuit breakers in the Technical Specification Table 3.8.4.1-1 is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to requirements with respect to the installation and use of facility components located within the restricted area as defined in 10 CFR Part 20 and a change to the surveillance requirements. 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 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 this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (51 FR 16932) on May 7, 1986 and consulted with the State of Pennsylvania. No public comments were received, and the State of Pennsylvania did not have any comments.

The staff 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, 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 nor to the health and safety of the public.

Principal Contributors: M. C. Thadani,
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S. Rhow

Dated: June 5, 1987