December 18, 1989

Docket No. 50-388

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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: EMERGENCY CHANGE TO TECHNICAL SPECIFICATIONS RELATED TO 18 MONTH SURVEILLANCE REQUIREMENTS (TAC NO. 75283)

RE: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 2

The Commission has issued the enclosed Amendment No. 62 to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station, Unit 2. This amendment is in response to your letter dated November 20, 1989.

This amendment is being issued on an emergency basis and would permit a one-time relief from (one 18-month cycle) surveillance requirements for Reactor Core Isolation Cooling and High Pressure Coolant Injection systems.

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

Sincerely,

/s/

Mohan C. Thadani, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 62 to License No. NPF-22
2. Safety Evaluation

cc w/enclosures:
See next page

[75283]

PDI-2/LA	PDI-2/PM	PDI-2/D	OGC
MO'Brien	MThadani:mj	WButler	MYoung
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Senior Vice President-Nuclear
Pennsylvania Power and Light Company
2 North Ninth Street
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Mohan C. Thadani, Project Manager
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cc w/enclosures:
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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. 62
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 November 20, 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. 62 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 18, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 62

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 5-5	3/4 5-5
3/4 5-6	3/4 5-6
3/4 7-9	3/4 7-9
3/4 7-10	3/4 7-10*

SURVEILLANCE REQUIREMENTS (Continued)

2.# For the HPCI system, verifying that the system develops a flow of at least 5000 gpm against a test line pressure of 210 ± 15 psig when steam is being supplied to the turbine at 150 ± 15 psig.*

3. Performing a CHANNEL CALIBRATION of the CSS header ΔP instrumentation and verifying the setpoint to be ≤ 1 psid.

4. Verifying that the suction for the HPCI system is automatically transferred from the condensate storage tank to the suppression chamber on a condensate storage tank water level - low signal and on a suppression chamber - water level high signal.

5. Performing a CHANNEL CALIBRATION of the condensate transfer pump discharge low pressure alarm instrumentation and verifying the low pressure alarm setpoint to be ≥ 113 psig.

d. For the ADS:

1. At least once per 31 days, performing a CHANNEL FUNCTIONAL TEST of the accumulator backup compressed gas system low pressure alarm system.

2. At least once per 18 months:

a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.

b) Manually** opening each ADS valve when the reactor steam dome pressure is greater than or equal to 100 psig* and observing that either:

1) The control valve or bypass valve position responds accordingly, or

2) There is a corresponding change in the measured steam flow.

---

*The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

**ADS solenoid energization shall be used alternating between ADS Division 1 and ADS Division 2.

#For the startup following the Third Refueling and Inspection Outage, this surveillance shall read as follows:

For the HPCI System, verifying that the system develops a flow of at least 4850 gpm against a test line pressure of 600 psig when steam is being supplied to the turbine at 150 ± 15 psig.*

SURVEILLANCE REQUIREMENTS (Continued)

c) Performing a CHANNEL CALIBRATION of the accumulator backup compressed gas system low pressure alarm systems and verifying air alarm setpoint of 2070 ± 35 psig on decreasing pressure.

e. During the first simultaneous shutdown of Units 1 and 2 of duration greater than 7 days that occurs more than 5 years following the previous testing, the following shall be accomplished:

1. A functional test of the interlocks associated with LPCI and CS pump starts in response to an automatic initiation signal in Unit 1 followed by a "False" automatic initiation signal in Unit 2.

2. A functional test of the interlocks associated with LPCI and CS pump starts in response to an automatic initiation signal in Unit 2 followed by a "False" automatic initiation signal in Unit 1.

3. A functional test of the interlocks associated with LPCI and CS pump starts in response to simultaneous occurrence of an automatic initiation signal in both Unit 1 and Unit 2 and a Loss-of-Offsite-Power condition affecting both Unit 1 and Unit 2.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 18 months by:

1. Performing a system functional test which includes simulated automatic actuation and restart and verifying that each automatic valve in the flow path actuates to its correct position, but may exclude actual injection of coolant into the reactor vessel.

2.# Verifying that the system will develop a flow of greater than or equal to 600 gpm in the test flow path when steam is supplied to the turbine at a pressure of 150, + 15, -0 psig.*

3. Verifying that the suction for the RCIC system is automatically transferred from the condensate storage tank to the suppression pool on a condensate storage tank water level-low signal.

4. Performing a CHANNEL CALIBRATION of the condensate transfer pump discharge low pressure alarm instrumentation and verifying the low pressure alarm setpoint to be greater than or equal to 113 psig.

d. In the event the RCIC system is actuated and injects water into the reactor coolant system, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

*The provisions of Specification 4.0.4 are not applicable provided the surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the tests.

#For the startup following the Third Refueling and Inspection Outage, this surveillance shall read as follows:

Verifying that the system will develop a flow of greater than or equal to 530 gpm with a test line pressure of 480 psig in the test flow path when steam is supplied to the turbine at a pressure of 150, +15, -0 psig.*

3/4.7.4 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.4 All snubbers shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3. OPERATIONAL CONDITIONS 4 and 5 for snubbers located on systems required OPERABLE in those OPERATIONAL CONDITIONS.

ACTION:

With one or more snubbers inoperable on any system, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.4g on the attached component or declare the attached system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.4 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Inspection Types

As used in this specification, type of snubber shall mean snubbers of the same design and manufacturer, irrespective of capacity.

b. Visual Inspections

Snubbers are categorized as inaccessible or accessible during reactor operation. Each of these groups (inaccessible and accessible) may be inspected independently according to the schedule below. The first inservice visual inspection of each type of snubber shall be performed after 4 months but within 10 months of commencing POWER OPERATION and shall include all snubbers. If all snubbers of each type on any system are found OPERABLE during the first inservice visual inspection, the second inservice visual inspection of that system shall be performed at the first refueling outage. Otherwise, subsequent visual inspections of a given system shall be performed in accordance with the following schedule:

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 62 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 November 20, 1989, Pennsylvania Power & Light Company (the licensee) requested an amendment to Facility Operating License No. NPF-22 for the Susquehanna Steam Electric Station (SSES), Unit 2. The proposed amendment would revise the Technical Specifications (TSs) related to 18 month surveillance requirements to demonstrate that the flowrates of the test flow paths of Reactor Core Isolation Cooling (RCIC) System and High Pressure Coolant Injection (HPCI) system meet the requirements of the Technical Specifications sections 4.5.1.c.2 and 4.7.3.c.2. The proposed revision is requested for one 18-month cycle only.

By letter dated November 20, 1989, the staff granted the request for a one-time enforcement discretion regarding the subject requirement which would remain in effect until the NRC acted on the emergency TS amendment request.

2.0 EVALUATION

The SSES Technical Specifications 4.5.1.c.2 and 4.7.3.c.2 require that every 18 months the licensee demonstrate that (1) HPCI systems develops a flowrate of at least 5000 gpm against a test line pressure of 210 ± 15 psig when steam is supplied to the turbine at 150 ± 15 psig, and (2) RCIC system should develop a flowrate of greater than or equal to 600 gpm in the test flowpath when steam is supplied to the turbine at a pressure of 150 +15, -0 psig.

When the licensee performed the test flowpath flowrate surveillances of HPCI and RCIC systems (during the SSES, Unit No. 2 third refueling outage) it could only get a maximum HPCI test flowpath flowrate of 4,850 gpm (5000 gpm is required by the Technical Specifications), and maximum RCIC test flowpath flowrate of 530 gpm (600 gpm is required by the Technical Specifications). The licensee's investigation disclosed that the reduction in the flowrate was caused by the third refueling outage modification of the throttle valves in the HPCI and RCIC test flowpaths. The modifications were made to correct severe cavitations of these valves during previous surveillance tests. The licensee's calculations show that the HPCI and RCIC systems are capable of achieving the rated injection flow to the reactor pressure vessel (RPV). Furthermore, when the HPCI and RCIC pumps were tested at the nominal steam pressure of 950 psig, all Technical Specification requirements were met, and pumps did not show any performance degradation.

The licensee, therefore, requested a one cycle relief from the 18 month Technical Specification surveillance requirements of HPCI test flowpath surveillance flowrate of 5000 gpm and RCIC test flowpath surveillance flowrate of 600 gpm.

The staff has reviewed the licensees request and finds that there is adequate assurance that both HPCI and RCIC systems will be capable of achieving the rated flowrate to the RPV when called upon to do so. Furthermore, the licensee's tests at the nominal steam pressure of 950 psig demonstrate that there has been no degradation of performance of the HPCI and RCIC pumps. The staff, therefore, finds safety requirements underlying the Technical Specification requirements will be met and a one cycle relief from the Technical Specifications 4.5.1.c.2 and 4.7.3.c.2 is acceptable.

3.0 EMERGENCY BASIS

In its letter dated November 20, 1989, the licensee provided the following basis justifying the need for an emergency change "10 CFR 50.91 provides guidance on the information required to support an application for an emergency change":

> First, it requires the applicant to justify that an emergency exists i.e., "... failure to act in a timely way would result in derating or shutdown of a nuclear unit...." Under the current configuration, the HPCI and RCIC Systems can not be tested in the test flow loop to the Technical Specifications because of a recent modification to the test throttle valve in each system. The test loops can not be modified in a timely manner to support startup following the Third Refueling and Inspection Outage. By not changing the acceptance criteria in the Technical Specification Susquehanna SES Unit 2 would have to remain shutdown until the test lines could be modified. This shutdown is unnecessary since... pump performance exceeds the Technical Specification requirements. The required operation of the HPCI and RCIC systems are not affected, only the test line pressure drop has been affected.
>
> Second, 10 CFR 50.91 requires a licensee to "... explain why this emergency situation occurred and why it could not avoid the situation...". The discovery of this problem was a result of the performance of surveillance testing. This problem was caused by the modification to the test line throttle valves creating larger than anticipated pressure drops at the minimal steam pressure conditions since the problem of throttle valve cavitation was seen at the maximum steam pressure. When this conflict was discovered an Enforcement Discretion was requested in order to continue testing both the HPCI and RCIC systems since the problems are with the test line and not the systems performance to inject rated flow into the RPV. The appropriate internal processes were implemented in support of this submittal.

In light of the above, the staff finds that (1) the licensee acted promptly by initiating the requested amendment upon discovery of the problem, and (2) an emergency amendment is necessary for startup. Thus, there is an acceptable basis for emergency action on the licensee's request pursuant to 10 CFR 50.91(a)(5).

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 from any 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 conclusion provided by the licensee in its November 20, 1989 request.

The proposed changes do not:

I. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The changes to the Technical Specifications testing criteria for low pressure are due to the modifications to the test line throttle valves and not to any modifications in the injection lines, pumps or turbines. Meeting the new testing criteria proves that the pumps are capable of achieving rated injection to the RPV at a nominal steam pressure of 150 psig. This change does not modify the analyzed injection rates at minimal steam conditions only the test acceptance criteria for assuring that these injection rates are met.

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 changes to test acceptance criteria at minimal steam pressure do not affect the ability of the HPCI or RCIC systems to inject rated flow into the RPV. Since only the test acceptance criteria were changed, the possibility of a new or different kind of accident from any previously evaluated was not created.

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

The proposed changes do not alter the required injection rates into the RPV. They only change the acceptance criteria in the test flowpath for proving these injection rates. Therefore, the changes do not decrease the margin of safety.

Accordingly, the staff concludes that the amendment involves no significant hazards consideration.

5.0 STATE CONSULTATION

The Commonwealth of Pennsylvania was consulted on December 11, 1989 and had no comments on the determination.

6.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change 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 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 made a final no significant hazards finding with respect to this amendment. 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.

7.0 CONCLUSION

Based on the consideration discussed above, the staff has concluded 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 one previously evaluated or (c) significantly reduce a margin of safety and, therefore, the amendment does not involve significant hazards consideration; (2) there's 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 the amendment will not be inimical to the common defense and the security or to the health and safety of the public.

Principal Contributor: Mohan C. Thadani

Dated: December 18, 1989