

June 24, 1996

Mr. Robert G. Byram  
Senior Vice President-Nuclear  
Pennsylvania Power and Light Company  
2 North Ninth Street  
Allentown, PA 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1 - ISSUANCE OF TECHNICAL SPECIFICATION AMENDMENT REGARDING DELETION OF THREE RESIDUAL HEAT REMOVAL RELIEF VALVES (TAC NO. M94620)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 157 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station (SSES), Unit 1. This amendment is in response to your letter dated January 26, 1996.

This amendment deletes from SSES Unit 1 Technical Specification Table 3.6.3-1, "Primary Containment Isolation Valves," three relief valves in the residual heat removal system. These specific valves which were originally intended to support the steam condensing mode, were previously eliminated from the plant design. The valves are being replaced during the Unit 1 9th refueling outage by blind flanges.

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

Sincerely,

Original signed by:

Chester Poslusny, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-387

- Enclosures: 1. Amendment No. 157 to License No. NPF-14
- 2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION

Docket File  
PUBLIC  
PDI-2 Reading  
SVarga

JStolz  
MO'Brien  
CPoslusny  
OGC

GHill(2)  
CBerlinger  
CGrimes  
ACRS

JWhite, RGN-I  
RJones  
JKennedy

*Note Change on p. 2.*

*1/1  
DFDI*

|        |          |           |        |            |         |         |
|--------|----------|-----------|--------|------------|---------|---------|
| OFFICE | PDI-2/A  | PDI-2/PM  | SRXB   | SCSB       | OGC     | PDI-2/D |
| NAME   | MO'Brien | CPoslusny | RJones | CBerlinger | C Malco | JStolz  |
| DATE   | 6/13/96  | 6/4/96    | 6/1/96 | 6/4/96     | 6/17/96 | 6/24/96 |

OFFICIAL RECORD COPY  
DOCUMENT NAME: SU194620.AMD

9606280053 960624  
PDR ADOCK 05000387  
PDR

280027

**COPY**



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

June 24, 1996

Mr. Robert G. Byram  
Senior Vice President-Nuclear  
Pennsylvania Power and Light Company  
2 North Ninth Street  
Allentown, PA 18101

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1 - ISSUANCE OF TECHNICAL SPECIFICATION AMENDMENT REGARDING DELETION OF THREE RESIDUAL HEAT REMOVAL RELIEF VALVES (TAC NO. M94620)

Dear Mr. Byram:

The Commission has issued the enclosed Amendment No. 157 to Facility Operating License No. NPF-14 for the Susquehanna Steam Electric Station (SSES), Unit 1. This amendment is in response to your letter dated January 26, 1996.

This amendment deletes from SSES Unit 1 Technical Specification Table 3.6.3-1, "Primary Containment Isolation Valves," three relief valves in the residual heat removal system. These specific valves which were originally intended to support the steam condensing mode, were previously eliminated from the plant design. The valves are being replaced during the Unit 1 9th refueling outage by blind flanges.

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

Sincerely,

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

Chester Poslusny, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-387

Enclosures: 1. Amendment No. 157 to  
License No. NPF-14  
2. Safety Evaluation

cc w/encls: See next page

Mr. Robert G. Byram  
Pennsylvania Power & Light Company

Susquehanna Steam Electric Station,  
Units 1 & 2

cc:

Jay Silberg, Esq.  
Shaw, Pittman, Potts & Trowbridge  
2300 N Street N.W.  
Washington, D.C. 20037

Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Bryan A. Snapp, Esq.  
Assistant Corporate Counsel  
Pennsylvania Power & Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

Mr. Harold G. Stanley  
Vice President-Nuclear Operations  
Susquehanna Steam Electric Station  
Pennsylvania Power and Light Company  
Box 467  
Berwick, Pennsylvania 18603

Mr. J. M. Kenny  
Licensing Group Supervisor  
Pennsylvania Power & Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

Mr. Herbert D. Woodeshick  
Special Office of the President  
Pennsylvania Power and Light Company  
Rural Route 1, Box 1797  
Berwick, Pennsylvania 18603

Mrs. Maitri Banerjee  
Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
P.O. Box 35  
Berwick, Pennsylvania 18603-0035

George T. Jones  
Vice President-Nuclear Engineering  
Pennsylvania Power and Light Company  
2 North Ninth Street  
Allentown, Pennsylvania 18101

Mr. William P. Dornsife, Director  
Bureau of Radiation Protection  
Pennsylvania Department of  
Environmental Resources  
P. O. Box 8469  
Harrisburg, Pennsylvania 17105-8469

Dr. Judith Johnsrud  
National Energy Committee  
Sierra Club  
433 Orlando Avenue  
State College, PA 16803

Mr. Jesse C. Tilton, III  
Allegheny Elec. Cooperative, Inc.  
212 Locust Street  
P.O. Box 1266  
Harrisburg, Pennsylvania 17108-1266

Chairman  
Board of Supervisors  
738 East Third Street  
Berwick, PA 18603



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

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. 157  
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 January 26, 1996, 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.

9606280057 960624  
PDR ADOCK 05000387  
P PDR

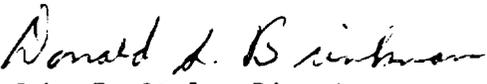
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of the Facility Operating License No. NPF-14 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 157 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 and is to be implemented within 60 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
for John F. Stolz, Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: June 24, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 157

FACILITY OPERATING LICENSE NO. NPF-14

DOCKET NO. 50-387

Replace the following page of the Appendix A Technical Specifications with enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

REMOVE

3/4 6-25

INSERT

3/4 6-25

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

Valve Function and Number

Other Valves (Continued)

RHR-MINIMUM RECIRCULATION FLOW<sup>(f)(c)</sup>

HV-151F007 A,B

RHR - RELIEF VALVE DISCHARGE<sup>(c)</sup>

PSV-15106 A,B

CS INJECTION

HV-152F006 A,B

CS MINIMUM RECIRCULATION FLOW<sup>(f)(c)</sup>

HV-152F031 A,B

CONTAINMENT INSTRUMENT GAS

1-26-072

1-26-074

1-26-152

1-26-154

1-26-164

RECIRCULATION PUMP SEAL WATER

143F013 A,B

XV-143F017 A,B

TIP SHEAR VALVES<sup>(d)</sup>

C51-J004 A,B,C,D,E

SLCS<sup>(b)</sup>

148F007

HPCI TURBINE EXHAUST<sup>(b)</sup>

155F049



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO.157 TO FACILITY OPERATING LICENSE NO. NPF-14

PENNSYLVANIA POWER AND LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-387

1.0 INTRODUCTION

By letter dated January 26, 1996, the Pennsylvania Power and Light Company (the licensee) submitted a request for changes to the Susquehanna Steam Electric Station (SSES), Unit 1, Technical Specifications (TS). The requested changes would delete from SSES Unit 1 TS Table 3.6.3-1, "Primary Containment Isolation Valves," three relief valves in the residual heat removal (RHR) system.

2.0 BACKGROUND

The licensee indicated in its submittal that in the original design of the SSES, Unit 1, the RHR system included a steam condensing mode. Since the time of licensing, this mode for the RHR system was eliminated from the plant. After the mode was eliminated, not all piping and valving was removed. The licensee proposes to remove three RHR system relief valves and replace the valves with blind flanges or the equivalent. The proposed TS change would reflect this design change implementation by removing these three valves from the list of containment isolation valves from TS Table 3.6.3-1.

3.0 EVALUATION

As indicated in the SSES Final Safety Analysis Report (FSAR), Valves PSV-151F055A & B are pressure relief valves located on the RHR system steam supply line from high pressure coolant injection (HPCI) steam supply between the RHR heat exchanger and the steam supply pressure control valves. This steam supply line was previously isolated by welded caps between the pressure control valves and the RHR system. As per the original design of the SSES units, these relief valves were originally provided to protect the RHR heat exchanger and its shell side inlet piping in the event both pressure control valves failed to open during the steam condensing mode of RHR. The discharge of the relief valves is directed to the suppression pool. As noted in the licensee's submittal, these valves were designed to remain closed to maintain RHR system integrity during all RHR modes except when the pressure in the piping exceeds the relief setpoint that could occur during the steam

condensing mode. The size of these valves was established based on the design pressure of the piping and heat exchanger such that the design pressure would not be exceeded by more than 10% during the pressure transient with the pressure control valves in the full open position. PP&L also stated that these valves are no longer required for the following reasons:

- The steam condensing mode has been eliminated from the RHR system. Since the HPCI steam supply piping to the RHR heat exchangers was cut and capped, the potential for the overpressure condition due to pressure control valve failure in the steam line no longer exists.
- The RHR heat exchanger and associated piping are still protected from a pressure transient caused by thermal expansion by the thermal relief valves provided as part of the original design. The protection is provided by the heat exchanger shell relief valve when the RHR heat exchanger is isolated and by an additional relief valve when the heat exchanger is not isolated.
- The system and containment boundary integrity will be maintained by installing blind flanges or equivalent.

The third pressure relief valve which the licensee is proposing to remove is PSV-151F097. This valve is located on the RHR system condensate discharge line to reactor core isolation cooling (RCIC) pump suction. This valve was provided for overpressure protection in the event either control valve failed open during the steam condensing mode of operation. This valve was designed to remain closed to maintain the pressure integrity of the piping and to open when the pressure in the piping exceeds the relief setpoint. The size of this valve was established based on the design pressure of the RCIC pump suction piping such that the piping design pressure would not be exceeded by more than 10% during the pressure transient with the control valve in the full open position. As indicated in its submittal, the licensee stated this valve is no longer required for the following reasons:

- The steam condensing mode has been eliminated from the RHR system. The potential for an overpressure condition during or following a steam condensing mode of operation does not exist.
- In order to eliminate the potential for RHR pressurizing the RCIC pump suction piping, the piping between the two systems will be isolated via blind flange or equivalent.
- The RCIC suction piping is still protected from an overpressure condition by a pressure relief valve. This relief valve was provided to protect the RCIC pump suction piping from overpressurization during standby conditions due to leakage into the RCIC system from higher pressure systems such as the Feedwater System.
- The system and containment boundary integrity will be maintained by installing a blind flange or equivalent.

In the staff's safety evaluation for the original containment isolation system design, NUREG-0776, April 1981, the staff reflected the results of the review of the containment isolation valves and associated piping and penetrations necessary to isolate the primary containment in the event of a loss-of-coolant accident. The objective of the containment isolation system is to allow the normal or emergency passage of fluids through the containment boundary while preserving the integrity of the containment boundary to prevent or limit the escape of fission products from a postulated loss-of-coolant accident. The staff concluded in its evaluation that the proposed design of the containment isolation system satisfies the requirements of General Design Criteria (GDC) 54, 55, 56, and 57 and was found to be acceptable.

As discussed above, the modifications made to delete the RHR steam condensing mode have been made. This has eliminated the need to allow the passage of fluids through these three containment boundaries and the need to open the isolation valves PSV-151F055A, PSV-151F055B, and PSV-151F097. The existing design with the valves maintained in a closed position meets the GDC listed above and therefore the replacement of each valve with a blind flange or equivalent will also meet these criteria. Further, the licensee indicated that these flanges will be local leak rate tested after installation and will be included in subsequent Type B local leak rate testing by virtue of their design. Based on the information discussed above and the fact that each of the penetrations will continue to maintain containment boundary integrity, the staff finds the proposed TS change deleting these three RHR valves from TS Table 3.6.3-1 to be acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (61 FR 13531). Accordingly, the 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 or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Kennedy

Date: June 24, 1996