

August 17, 1987

Docket No. 50-387

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 CHANGES TO FUNCTIONAL TESTING OF SNUBBERS  
(TAC NO. 65159)

RE: SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

The Commission has issued the enclosed Amendment No. 67 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 April 8, 1987.

This amendment changes the SSES, Unit 1 Technical Specifications to delete the requirements that the mechanical snubbers' functional test shall verify that, "the drag force shall not have increased more than 50% since the last surveillance test."

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

Sincerely,

Robert E. Martin /s/ for

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

Enclosures:

1. Amendment No. 67 to License No. NPF-14
2. Safety Evaluation

cc w/enclosures:  
See next page

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*MO'Brien*  
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MThadani:ca  
8/10/87

PDI-2/D  
WButler  
8/11/87

OGC  
*WButler*  
8/12/87



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

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Pennsylvania Power and Light Company  
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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. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 67  
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 April 8, 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-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. 67 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 to be implemented by October 1, 1987.

FOR THE NUCLEAR REGULATORY COMMISSION

**Robert E. Martin /s/ for**

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: **August 17, 1987**

*MB*  
PDI-2/DA  
WB  
8/10/87

*FM* PDI-2/PM  
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8/10/87 *WB*

OGC  
*WButler*  
8/12/87  
PDI-2/D  
WButler  
8/17/87 *WB*

3. This license amendment is effective as of its date of issuance to be implemented by October 1, 1987.

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: **August 17, 1987**

ATTACHMENT TO LICENSE AMENDMENT NO. 67

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 page is identified by Amendment number and contains vertical lines indicating the areas of change. The overleaf page is provided to maintain document completeness.\*

REMOVE

3/4 7-11\*  
3/4 7-12

INSERT

3/4 7-11\*  
3/4 7-12

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) that attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of these visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible, and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Surveillance Requirements 4.7.4.d.

c. Functional Tests

During the first refueling shutdown and at least once per 18 months thereafter during shutdown, a representative sample of at least that number of snubbers which follows the expression  $35 (1 + \frac{c}{2})$  where  $c = 4$ , is the allowable number of snubbers not meeting the acceptance criteria selected by the operator, shall be functionally tested either in-place or in a bench test. For each number of snubbers above  $c$  which does not meet the functional test acceptance criteria of Specifications 4.7.4.d., an additional sample selected according to the expression  $35 (1 + \frac{c}{2}) (\frac{2}{c+1})^2 (a - c)$  shall be functionally tested, where  $a$  is the total number of snubbers found inoperable during the functional testing of the representative sample.

Functional testing shall continue according to the expression  $b [35 (1 + \frac{c}{2}) (\frac{2}{c+1})^2]$  where  $b$  is the number of snubbers found inoperable in the previous re-sample, until no additional inoperable snubbers are found within a sample or until all snubbers have been functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle.
2. Each snubber within 5 feet of heavy equipment, valve, pump, turbine, motor, etc.
3. Each snubber within 10 feet of the discharge from a safety relief valve.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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Functional Test (Continued)

In addition to the regular sample, snubbers which failed the previous functional test shall be retested during the next test period. If a spare snubber has been installed in place of a failed snubber, then both the failed snubber, if it is repaired and installed in another position, and the spare snubber shall be retested. Test results of these snubbers may not be included for the re-sampling.

If any snubber selected for functional testing either fails to lockup or fails to move, i.e., frozen in place, the cause will be evaluated and if caused by manufacturer or design deficiency all snubbers of the same design subject to the same defect shall be functionally tested. This testing requirement shall be independent of the requirements stated above for snubbers not meeting the functional test acceptance criteria.

For any snubber(s) found inoperable, an engineering evaluation shall be performed on the components which are supported by the snubber(s). The purpose of this engineering evaluation shall be to determine if the components supported by the snubber(s) were adversely affected by the inoperability of snubber(s) in order to ensure that the supported component remains capable of meeting the designed service.

d. Mechanical Snubbers Functional Test Acceptance Criteria

The mechanical snubber functional test shall verify that:

1. The force that initiates free movement of the snubber rod in either tension or compression is less than the specified maximum drag force.
2. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
3. Snubber release rate, where required, is within the specified range in compression or tension. For snubbers specifically required not to displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 67 TO FACILITY OPERATING LICENSE NO. NPF-14

PENNSYLVANIA POWER & LIGHT COMPANY

ALLEGHENY ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-387

SUSQUEHANNA STEAM ELECTRIC STATION, UNIT 1

1.0 INTRODUCTION

Pennsylvania Power & Light Company (PP&L) by letter dated April 8, 1987, submitted a proposed change to the Susquehanna Steam Electric Station Unit 1 snubber Technical Specifications (TSs). The requested change removes from the TS the mechanical snubber functional test acceptance criterion that, "Drag force shall not have increased by more than 50% since the last surveillance test."

The licensee operates two adjacent nuclear plants, Susquehanna Steam Electric Station Units 1 and 2. The licensee has requested to modify the snubber TS drag force acceptance criterion of Unit 1 to be more consistent with Unit 2, one of the more recently licensed plants. The TS for Unit 2 snubbers reflect the NRC reassessment of the snubber testing requirements as a result of accumulation of experience with snubber testing at older plants.

2.0 EVALUATION

The staff has evaluated the licensee's proposed change to remove the snubber functional test criterion in TS paragraph 4.7.4.D.1 that, "Drag force shall not have increased more than 50% since the last surveillance test." The staff's review included consideration of pertinent snubber testing documents including:

- NRC Snubber TS Generic Letter of November 20, 1980;
- NRC Snubber TS Generic Letter 84-13, of May 3, 1984;
- Snubber TS of recently licensed NTOLs (Hope Creek, Limerick 1, Susquehanna 2, Millstone 3);
- Pacific Scientific (PSA) mechanical shock arrestor catalog PSA-4;
- PSA Inspection Test Report explanation dated February 1982;
- PSA Acceptance Test Report I.T. 519 of May 2, 1974 for PSA-1 shock arrestor;
- PSA Standard Design Specification Report DR 1319 of April 17, 1975;
- Licensee's Specification M1090, Inservice Testing of Mechanical Snubbers;
- Licensee's Procedure SM-100-004, Mechanical Snubbers Functional Testing (Unit 1); and
- Licensee's Procedure SM-200-002, Mechanical Snubber Functional Testing (Unit 2).

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While the staff believes that increased drag force could indicate degradation of a snubber, the staff also agrees that the 50% increase in drag force is an inappropriate test failure criterion. A snubber with a very low initial drag force could be categorized as non-functional based on a 50% increase in drag force even though the magnitude of the measured drag force is well within acceptable values. Thus, a snubber could be declared inoperable with a small drag force that has no detrimental effect on the system or equipment to which it is attached. The licensee's revised test procedure contains a quantitative maximum drag force limit for each size snubber. This is a more suitable method to assess drag force acceptability.

Additionally, both Unit 1 and Unit 2 would have a common specification for Inservice Testing of Mechanical Snubbers, M1090, that contains specific breakaway and running drag testing requirements and acceptance criteria. The use of a common specification will aid in preventing the inadvertent testing errors that can occur with separate specifications.

Based on the foregoing evaluation, the staff finds the licensee's proposed amendment request to be consistent with the staff position to delete the 50% increase in drag force requirement from the snubber TS paragraph 4.7.4.D.1 to be acceptable. Deletion of the 50% drag force requirement is also consistent with the staff position taken on the more recently licensed plants.

### 3.0 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 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 (52 FR 20804) on June 3, 1987 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 Contributor: H. Gregg

Dated: August 17, 1987