

June 5, 1989

Docket No. 50-272

Mr. Steven E. Miltenberger
Vice President and Chief Nuclear
Officer
Public Service Electric & Gas Company
Post Office Box 236
Hancocks Bridge, New Jersey 08038

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ACRS (10)	CMiles,GPA/PA	

Dear Mr. Miltenberger:

SUBJECT: EMERGENCY TECHNICAL SPECIFICATION CHANGE, SNUBBER SURVEILLANCE TEST REQUIREMENTS (TAC NO. 73067)

RE: SALEM GENERATING STATION, UNIT NO. 1

The Commission has issued the enclosed Amendment No. 98 to Facility Operating License No. DPR-70 for the Salem Generating Station, Unit No. 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated May 5, 1989. It was prepared and issued on an emergency basis for Salem Unit 1 to avoid unnecessary personnel exposure to perform additional snubber tests.

The amendment consists of a change to the Technical Specifications to delete the criterion that requires expanding the sample if the measured drag force exceeds the previously measured drag force by more than 50%.

The staff reviewed the circumstances associated with your request and concluded that you provided a sufficient basis for finding that the situation could not have been avoided by prior application. Therefore, in accordance with 10 CFR 50.91(a)(5), a valid emergency existed.

This amendment was authorized for Salem Unit 1 by telephone on May 12, 1989 and confirmed by letter on May 12, 1989.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

- Amendment No. 98 to License No. DPR-70
- Safety Evaluation

cc w/enclosures:
See next page

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PDR ADDCK 05000272
PDC

WButler
5/19/89

JStone:mr
5/19/89

PDI-2/D
WButler
5/19/89

NCO
OGC
5/25/89

[SALEM AMENDMENT]

BBoger
6/15/89

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cc



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

June 5, 1989

Docket No. 50-272

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Vice President and Chief Nuclear
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Public Service Electric & Gas Company
Post Office Box 236
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Sincerely,

A handwritten signature in black ink, appearing to read "B. Boger", written over a horizontal line.

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 98 to
License No. DPR-70
3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Steven E. Miltenberger
Public Service Electric & Gas Company

Salem Nuclear Generating Station

cc:

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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-272

SALEM GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 98
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated May 5, 1989 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and 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 rules and 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 Facility Operating License No. DPR-70 is hereby amended to read as follows:

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PDR ADOCK 05000272
P PDC

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 98, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment was effective on May 12, 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 5, 1989

PDI-2/LA
MJB:ten
5/19/89

PDI-2/PM
JStone:mr
5/19/89

OGC NCO
5/25/89

PDI-2/D
WButler
5/19/89

BBoger
6/15/89

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FOR THE NUCLEAR REGULATORY COMMISSION



Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 5, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 98

FACILITY OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove Page

3/4 7-30

Insert Page

3/4 7-30

SURVEILLANCE REQUIREMENTS (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 the 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 the snubber(s) in order to ensure that the supported component remains capable of meeting the designed service.

d. Hydraulic Snubbers Functional Test Acceptance Criteria

The hydraulic snubber functional test shall verify that:

1. Activation (restraining action) is achieved within the specified range of velocity or acceleration in both tension and compression.
2. Snubber bleed, or release rate, where required, is within the specified range in compression or tension. For snubbers specifically required to not displace under continuous load, the ability of the snubber to withstand load without displacement shall be verified.

e. Mechanical Snubbers Functional 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.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 98 TO FACILITY OPERATING

LICENSE NO. DPR-70

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

SALEM GENERATING STATION, UNIT NO. 1

DOCKET NO. 50-272

1.0 INTRODUCTION

By letter dated May 5, 1989, Public Service Electric & Gas Company requested an amendment to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit Nos. 1 and 2. The proposed amendments would delete the requirement in the Salem Technical Specification that the measured drag force of a mechanical snubber should not increase by more than 50% from the previous test result. The licensee contends that the current drag force comparison requirement which was intended to trend increases in drag force in order to predict impending snubber failure is not valid for Pacific Scientific Mechanical Snubbers. This requirement may cause an unnecessary increase in the snubber test population even if the drag force is well below the acceptance criteria and may also result in a substantial increase in worker radiation exposure.

2.0 EVALUATION

This proposed change would revise Section 4.7.9.e.1 of the Salem Unit 1 Technical Specifications. The change would delete an aspect of mechanical snubber surveillance test acceptance criteria which requires a verification that the snubber drag force has not increased more than 50% since the previous functional test.

As described in LER 272/89-015-00 dated April 19, 1989, Salem Generating Station has not, in the past, performed the subject drag force comparison. However, since drag forces were measured and documented, it was possible to review the functional test data and apply the 50% criterion. This review indicated that (prior to the current Salem Unit 1 outage) four snubbers at Salem Unit 1 and nine snubbers at Salem Unit 2 had failed to meet the criterion. Only one of these snubbers, in Unit 2, was still in use and was replaced in April, 1989. None of these nine snubbers tested have exhibited drag forces more than 50% higher than those previously measured.

The snubber manufacturer (Pacific Scientific) has generated data related to mechanical snubber drag force loading. The results of these tests indicate that an increase in drag force from one inspection period to the next does not establish a trend that can be used to predict pending snubber failure. Based on this data, PSE&G concludes that a 50% increase in measured drag force from one inspection period to the next is no cause for declaring the snubber inoperable if the load is below the maximum allowable value.

The intent of the current drag force comparison requirement is to trend increases in drag force in order to predict impending snubber failure. However, the aforementioned Pacific Scientific test report indicates that an increase in drag force is not a valid indicator of imminent snubber failure. This supports the position that a 50% increase in drag force is not sufficient cause for declaring a snubber inoperable.

The Salem test results provided by the licensee support the position that the drag force comparison is not an adequate predicator of snubber failure. The data indicates that as many snubber drag forces have decreased as have increased from previous measurements without any identifiable correlation to snubber failures. These variations appear to be within the expected statistical variation considering the techniques and equipment used.

NRC has approved the deletion of the 50% drag force change comparison requirement from the Westinghouse Standard Technical Specifications in addition to approving license changes identical to this one for other plants. This requirement has not been included in the snubber technical specifications for more recent operating licenses (such as Hope Creek). The proposed change does not affect other aspects of snubber surveillance program and the primary acceptance criteria. Verification is required that the drag force is less than the specified allowable value. Compliance with ASME Section XI per Technical Specification 4.0.5 remains unchanged.

Based on a review of the data provided by the licensee, Staff concludes that the proposed amendment for the deletion of the Salem Generating Station Unit 1 requirement in Technical Specification 4.7.9.e.1 that the measured drag force of a mechanical snubber should not increase by more than 50% from the previous test result, is acceptable.

3.0 EMERGENCY CIRCUMSTANCES

During the current Salem Unit 1 outage, surveillance testing has identified a number of mechanical snubbers in the area of the pressurizer that have experienced an increase in drag force of more than 50 percent from the previous measurement. Due to the number of snubbers exceeding this drag force comparison criterion (6 out of 21 tested), an expanded sample of mechanical snubbers must be selected for functional testing due

to Technical Specification 4.7.9.e.1 requirement. Expanding the test sample for this reason could very possibly lead to the testing of the entire mechanical snubber population (81 snubbers). This amount of testing would require an additional 1000 man-hours of work and would result in an estimated increase in radiation exposure of approximately 40 man-rem, primarily due to the number of mechanical snubbers located in the vicinity of the pressurizer (48). This radiation exposure level could increase depending on the results of the additional testing and any required repair or replacement activity. The increased inspections could not have been reasonably foreseen since there has been no evidence of a trend toward increased drag force. The test results to date do not show a trend toward increasing drag force.

Without the proposed change, a significant addition to the outage man-rem exposure would result without any increase in safety.

Salem Unit 1 is scheduled to be synchronized with the grid on May 24, 1989. Without this relief the restart of Salem Unit 1 would be delayed. It is therefore concluded that this change satisfies the criteria of 10CFR 50.91(a)(5).

This amendment was authorized by telephone on May 12, 1989 and confirmed by letter dated May 12, 1989.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- (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 determined the following:

- A. Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed change does not change the following aspects of the snubber surveillance program:

- 1) Visual inspections and associated acceptance criteria, which include manual verification of freedom of movement where possible.
- 2) Retesting of any snubbers and/or replacements which failed the previous test.
- 3) Testing of all snubbers of the same design as a snubber selected for functional testing and fails to move or fails to lockup due to a design or manufacturing defect.
- 4) Verification that the drag force is less than the specified allowable value.
- 5) Verification that activation is achieved within the range of velocity or acceleration specified for both tension and compression.
- 6) Verification of acceptance release rate or ability to withstand load without displacement, as applicable.
- 7) Compliance with ASME Section XI per Technical Specification 4.0.5.

The measures listed above comprise an adequate program for assuring snubber operability. Verifying that drag force is within its specified allowable limit (Item 4 above) is the primary means of determining that the drag force is acceptable. The relevant specified parameters for each snubber subjected to functional testing will still be verified to be within allowable limits. Consequently, the proposed change does not increase the likelihood of snubber inoperability, nor does it increase the adverse effects of such inoperability on the associated systems.

The snubbers are included in the system design to mitigate the effects of a seismic event and allow for thermal expansion of the piping. The functional testing described above will determine the capability of the snubber to meet these requirements. The 50% drag force load comparison currently required by Technical Specification 4.7.9.e.1 does not supplement the operability determination of the snubber and can be deleted without adverse impact on the associated system.

Therefore, it may be concluded that the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- B. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed change does not involve changes to the design or application of snubbers. It does not involve any design or configuration changes to the plant. No new accident scenarios or new component failure mechanisms are introduced. Therefore, it may be concluded that the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

- C. Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

Snubbers provide assurance that the structural integrity of the fluid systems subjected to dynamic loads is maintained. The margin of safety associated with snubbers is related to the specified allowable limits imposed on performance parameters, including maximum allowable drag force. This change proposes to delete a test acceptance criterion related to a change in the measured drag force, and does not increase the maximum allowable value. Therefore, it may be concluded that the proposed change does not involve a reduction in a margin of safety as defined by the Technical Specifications. Based on the above discussion the staff concludes that this amendment meets the criteria and therefore does not involve a significant hazards consideration.

5.0 STATE CONCLUSION

The State of New Jersey was consulted on this matter and had no comments on the determination.

6.0 ENVIRONMENTAL CONSIDERATION

The 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, 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.

7.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, 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 any

previously evaluated or (c) significantly reduce a safety margin and, therefore, the amendment does not involve significant hazards consideration; (2) there is 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 security nor to the health and safety of the public.

Principal Contributors: J. Rajan and J. Stone

Dated: June 5, 1989