

September 17, 1999

Mr. Harold W. Keiser
Chief Nuclear Officer & President -
Nuclear Business Unit
Public Service Electric & Gas
Company
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - ISSUANCE OF AMENDMENT,
RE: FLOOD PROTECTION REQUIREMENTS (TAC NO. MA4632)

Dear Mr. Keiser:

The Commission has issued the enclosed Amendment No. 122 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated December 30, 1998, as supplemented September 13, 1999.

This amendment revises TS Limiting Condition for Operation 3.7.3 and TS Table 3.7.3-1. These changes modify the flood protection actions required when severe storm warnings that may affect the site are in effect, or during periods of elevated river water level.

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:

Richard B. Ennis, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: 1. Amendment No. 122 to
License No. NPF-57
2. Safety Evaluation

DFD 1/1

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

September 17, 1999

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Chief Nuclear Officer & President -
Nuclear Business Unit
Public Service Electric & Gas
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Sincerely,

A handwritten signature in black ink, appearing to read "R B Ennis".

Richard B. Ennis, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: 1. Amendment No. 122 to
License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

Hope Creek Generating Station

cc:

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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 122
License No. NPF-57

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company (PSE&G) dated December 30, 1998, as supplemented September 13, 1999, 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. NPF-57 is hereby amended to read as follows:

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(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 122 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into the license. PSE&G shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance, and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: September 17, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 122

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following pages of the Appendix "A" Technical Specifications with the attached revised pages. The revised pages are identified by Amendment number and contain marginal lines indicating the area of change.

Remove
3/4 7-9
3/4 7-10

Insert
3/4 7-9
3/4 7-10

PLANT SYSTEMS

3/4.7.3 FLOOD PROTECTION

LIMITING CONDITION FOR OPERATION
=====

3.7.3 Flood protection shall be provided for all safety related systems, components and structures when the water level of the Delaware River reaches 6.0 feet Mean Sea Level (MSL) USGS datum (95.0 feet PSE&G datum) at the Service Water Intake Structure.

APPLICABILITY: At all times.

ACTION:

- a. With severe storm warnings from the National Weather Service which may impact Artificial Island in effect or with the water level at the service water intake structure above elevation 6.0 feet MSL USGS datum (95.0 feet PSE&G datum), initiate and complete:
 - 1. The closing of all service water intake structure watertight perimeter flood doors identified in Table 3.7.3-1 within 1 hour, or declare affected service water system components inoperable and take the actions required by LCO 3.7.1.2;
- and -
 - 2. The closing of all power block watertight perimeter flood doors identified in Table 3.7.3-1 within 1.5 hours.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. Once closed, all access through the doors shall be administratively controlled.

- b. With the water level at the service water intake structure above elevation 10.5 feet MSL USGS datum (99.5 feet PSE&G datum), be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS
=====

4.7.3 The water level at the service water intake structure shall be determined to be within the limit by:

- a. Measurement at least once per 24 hours when the water level is below elevation 6.0 MSL USGS datum (95.0 feet PSE&G datum), and
- b. Measurement at least once per 4 hours when severe storm warnings from the National Weather Service which may impact Artificial Island are in effect.
- c. Measurement at least once per hour when the water level is equal to or above elevation 6.0 MSL USGS datum (95.0 feet PSE&G datum).

TABLE 3.7.3-1

PERIMETER FLOOD DOORS

INTAKE STRUCTURE DOORS

Water tight door 1
Water tight door 3
Water tight door 6
Water tight door 8

POWER BLOCK DOORS and HATCH

<u>Doors & Hatch</u>		<u>Location</u>
Hatch	Exterior	45; K
S-13	"	45.5; L
3340B	"	44; M
3337B	"	44; Md
6312	"	45.4; T
6323B	"	45.4; U
5315A	"	29.9; X
5315C	"	29; X
4323A	"	13.6; U
4304	"	13.6; U
3301A	"	13.6; Md
3305B	"	13.6; L
3315B	Interior-102'	25; H
3329A	"	27; H
3331B	"	35; H
3209A	Interior	26; H



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 122 TO FACILITY OPERATING LICENSE NO. NPF-57

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated December 30, 1998, as supplemented September 13, 1999, the Public Service Electric & Gas Company (PSE&G or the licensee) submitted a request for changes to the Hope Creek Generating Station (HCGS) Technical Specifications (TSs). The proposed amendment would revise TS Limiting Condition for Operation (LCO) 3.7.3 and TS Table 3.7.3-1. These changes would modify the flood protection actions required when severe storm warnings that may affect the site are in effect, or during periods of elevated river water level. The September 13, 1999, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

General Design Criteria (GDC) 2, of Appendix A to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, requires, in part, that structures, systems, and components important to safety be designed to withstand the effects of natural phenomena, such as floods, tsunamis, and seiches without loss of capability to perform their safety functions. As discussed in the HCGS Updated Final Safety Analysis Report (UFSAR) Section 3.1.2.1.2.1, the HCGS design basis for protection against natural phenomena is in conformance with GDC 2.

Regulatory Guide (RG) 1.102, "Flood Protection for Nuclear Power Plants," provides guidance regarding the types of flood protection acceptable to the NRC staff. In addition, RG 1.102 provides guidance in establishing shutdown TSs and emergency operating procedures related to flooding. As discussed in UFSAR Section 1.8.1.102, HCGS is in conformance with RG 1.102.

The HCGS design for flood protection is discussed in UFSAR Section 3.4.1. Safety-related systems and components that are located below the postulated maximum flood level are enclosed in reinforced concrete Seismic Category I structures that include specific design features for flood protection. The design of the Station Service Water System (SSWS) intake structure includes watertight doors installed in the exterior walls below flood level to protect the safety-related components that are located within the building (e.g., SSWS pumps).

The TS requirements related to flood protection are contained in TS LCO 3.7.3. Action Statement 3.7.3.a currently requires that with severe storm warnings that may affect the site in effect, or with the Delaware River level above 6.0 feet Mean Sea Level (95.0 feet PSE&G datum) at the SSWS intake structure:

- 1) all of the SSWS intake structure watertight doors identified in TS Table 3.7.3-1 must be closed within 1 hour (TS Action Statement 3.7.3.a.1), and
- 2) all power block watertight doors identified in Table 3.7.3-1 must be closed within 1.5 hours (TS Action Statement 3.7.3.a.2).

If the time requirements to close the watertight doors cannot be met, a plant shutdown is required in accordance with TS 3.0.3.

As discussed in the licensee's submittal dated December 30, 1998, TS Action Statement 3.7.3.a.1 would be revised to allow the operator to either comply with the existing requirements (i.e., close the SSWS intake structure watertight doors within 1 hour) or declare the affected SSWS components inoperable and take the actions required by the SSWS LCO (TS 3.7.1.2). In addition, TS Action Statement 3.7.3.a would be revised to provide specific plant shutdown guidance (in lieu of TS 3.0.3). Specifically, if the provisions of either TS Action Statement 3.7.3.a.1 or 3.7.3.a.2 were not met, the plant would be required to be in Hot Shutdown conditions within the next 12 hours and in Cold Shutdown conditions within the following 24 hours. Table 3.7.3-1 would also be revised to delete watertight doors associated with abandoned Unit 2 SSWS bays.

The licensee's submittal states that implementation of the proposed changes will enable HCGS to avoid unnecessary plant shutdown transients and will reduce operational burden while maintaining effective flood protection measures.

3.0 EVALUATION

The purpose of TS 3.7.3 is to ensure that the HCGS flood protection features are in place to protect safety related systems, components, and structures in the event of flooding conditions. With respect to the current requirements in TS Action Statement 3.7.3.a.1, the closing of the SSWS intake structure watertight doors ensures that the four SSWS pumps and associated support equipment are protected.

As discussed in the licensee's submittal dated December 30, 1998, the proposed TS changes address two issues. The first issue involves the elimination of unnecessary TS shutdown requirements. Specifically, TS 3.7.3 currently requires entry into a shutdown action statement (imposed by TS 3.0.3) if any of the SSWS intake structure watertight doors are not closed within 1 hour. Failure to close watertight doors associated with the abandoned Unit 2 SSWS bays has no impact on the safety related Unit 1 SSWS pumps and associated support equipment. Therefore, the proposed revisions to Table 3.7.3-1 to delete watertight doors associated with abandoned Unit 2 SSWS bays are acceptable. As discussed in the licensee's submittal dated September 13, 1999, the SSWS intake structure does not house any other equipment other than the SSWS pumps and associated support equipment. This submittal also

states that there are no operator actions required that would be restricted or hindered in a post-transient or post-accident scenario due to flooding caused by an unsecured door in the SSWS intake structure. Therefore, failure to close watertight doors associated with the Unit 1 SSWS bays only affects the SSWS pumps and associated support equipment. The proposed revision to TS Action Statement 3.7.3.a.1 (i.e., allow the operator to either comply with the existing requirements to close the SSWS intake structure watertight doors within 1 hour or declare the affected SSWS components inoperable and take the actions required by the SSWS LCO) results in an operator response that is appropriate to address plant conditions that would adversely impact the SSWS. Therefore, the proposed revision to TS Action Statement 3.7.3.a.1 is acceptable. The implementation of the proposed changes to Table 3.7.3-1 and TS Action Statement 3.7.3.a.1 will avoid unnecessary plant shutdown transients in situations where the ability of the SSWS to perform its design basis safety-related functions is maintained and the SSWS TS LCO would permit continued operation.

The second issue involves a reduction in the regulatory reporting burden that will be realized with the addition of specific plant shutdown guidance in lieu of TS 3.0.3 requirements. The required entry into TS 3.0.3, for any duration, regardless of safety significance, requires a submittal of a Licensee Event Report in accordance with the provisions of 10 CFR 50.73. The requirements in TS 3.0.3 state that when an LCO is not met, except as provided in the associated action requirements, within 1 hour action shall be taken to place the unit in an operational condition in which the specification does not apply by placing it in: at least Startup in 6 hours; at least Hot Shutdown within the following 6 hours; and at least Cold Shutdown within the subsequent 24 hours. Implementation of the proposed changes which require entry into Hot Shutdown conditions within 12 hours and Cold Shutdown conditions within the following 24 hours, ensures that the plant is placed in a safe shutdown condition in a more conservative timeframe than the requirements currently provided by TS 3.0.3 for the same conditions (i.e., Cold Shutdown is achieved in 36 hours in the proposed TS as opposed to 37 hours under the TS 3.0.3 provisions). The proposed TS change and its resultant reduction in regulatory reporting burden will not result in a significant change in the manner in which the plant is currently operated under the existing TSs. Therefore, the proposed revision to TS Action Statement 3.7.3.a to provide specific plant shutdown guidance (in lieu of TS 3.0.3) is acceptable.

Based on the above evaluation, the staff finds that:

- (1) The proposed TS revisions eliminate unnecessary TS shutdown requirements;
- (2) The proposed TS revisions reduce the regulatory reporting burden;
- (3) The proposed TS revisions are consistent with the requirements of GDC 2 such that structures, systems, and components important to safety will not lose their capability to perform their safety functions under flooding conditions; and
- (4) The proposed TS revisions will continue to provide acceptable measures for protection against flooding consistent with the guidance in RG 1.102.

Therefore, the proposed revisions to TS LCO 3.7.3 and TS Table 3.7.3-1 are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey 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 (64 FR 9200). 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: R. Ennis

Date: September 17, 1999