

November 6, 1997

Mr. Leon R. Eliason  
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 (TAC NO. M99681)

Dear Mr. Eliason:

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in partial response to your application dated September 29, 1997.

This amendment changes TS 3/4.11.1, "Liquid Effluent - Concentration." The change adds a requirement to perform weekly sampling and monthly and quarterly composite analyses of the station service water system when the reactor auxiliaries cooling system is contaminated. The licensee has also proposed an editorial change to TS Table 4.11.1.1.1-1. In Liquid Release Type B, the licensee is proposing that the acronym for Station Service Water System be changed from GSW to SSWS. This proposed change will be addressed in a future license amendment.

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/*  
David H. Jaffe, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-354

- Enclosures: 1. Amendment No. 108 to License No. NPF-57  
2. Safety Evaluation

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DATE	10/13/97	10/29/97	10/15/97	10/29/97	11/10/97

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*11/10/97*



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 6, 1997

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Sincerely,

A handwritten signature in black ink, appearing to read "D. Jaffe", written over a circular stamp or mark.

David H. Jaffe, Senior Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-354

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License No. NPF-57  
2. Safety Evaluation

cc w/encls: See next page

Mr. Leon R. Eliason  
Public Service Electric & Gas  
Company

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.108  
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 September 29, 1997, 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:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 108, 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



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: November 6, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 108

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

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

Remove

3/4 11-2

Insert

3/4 11-2

TABLE 4.11.1.1.1-1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) <sup>a</sup> (μCi/ml)	
A. Batch Waste Release <sup>b</sup> Sample Tanks (3)	P	P	Principal Gamma Emitters <sup>c</sup>	5x10 <sup>-7</sup>	
	Each Batch	Each Batch		I-131	1x10 <sup>-6</sup>
	P	M	Dissolved and Entrained Gases (Gamma Emitters)	1x10 <sup>-5</sup>	
	One Batch/M				
	P	M	H-3	1x10 <sup>-5</sup>	
	Each Batch	Composite <sup>d</sup>		Gross Alpha	1x10 <sup>-7</sup>
	P	Q	Sr-89, Sr-90	5x10 <sup>-8</sup>	
	Each Batch	Composite <sup>d</sup>		Fe-55	1x10 <sup>-6</sup>
	B. Continuous Releases <sup>e</sup> Station Service Water System (GSW) (If contaminated as indicated by SACS or RACS system.	NA	M	Principal Gamma Emitters <sup>c</sup>	5x10 <sup>-7</sup>
			Composite <sup>d</sup>		I-131
W		M	Dissolved and Entrained Gases (Gamma Emitters)	1x10 <sup>-5</sup>	
Grab Sample					
NA		M	H-3	1x10 <sup>-5</sup>	
		Composite <sup>d</sup>		Gross Alpha	1x10 <sup>-7</sup>
NA		Q	Sr-89, Sr-90	5x10 <sup>-8</sup>	
		Composite <sup>d</sup>		Fe-55	1x10 <sup>-6</sup>



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 108 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 September 29, 1997, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Hope Creek Generating Station (HCGS), Technical Specifications (TSs). This amendment changes TS 3/4.11.1, "Liquid Effluent - Concentration." The change adds a requirement to perform weekly sampling and monthly and quarterly composite analyses of the station service water system (SSWS) when the reactor auxiliaries cooling system (RACS) is contaminated. Also, an editorial change is proposed to TS Table 4.11.1.1.1-1, in Liquid Release Type B, which would change the acronym for Station Service Water System from GSW to SSWS.

2.0 DISCUSSION

Section 9.2.1 of the HCGS Updated Final Safety Analysis (UFSAR) describes the SSWS. Normally, the SSWS circulates water, via two of four SSWS pumps, from the Delaware River (the ultimate heat sink) to the heat exchangers associated with the safety auxiliary cooling system (SACS). Other non-essential heat loads, including the RACS, are cooled by the SSWS under normal conditions. The SSWS water from the SACS and RACS heat exchangers is normally discharged to the station cooling tower via a non-seismic Category I flow path. In the event that this normal flow path is unavailable, water is discharged directly to the plant yard via the seismic Category I emergency overboard (EOB) lines.

Under the current requirements of TS 3/4 11.1, specifically, TS Table 4.11.1.1.1-1, "Radioactive Liquid Waste Sampling and Analysis Program", should the SACS become contaminated, weekly sampling and monthly and quarterly composite analyses of the SSWS is required. The requirement is needed because the SSWS may be operated at a pressure below that of the SACS so that any SACS contamination could be discharged to the environment via the SACS heat exchangers (should a tube leak occur) and the SSWS. As indicated in the September 29, 1997 submittal, the SSWS, contrary to the statement in Section 9.2.8.2 of the UFSAR, may also be operated at pressures below that of the RACS resulting in the same potential for release of contamination as hypothesized for SACS. Accordingly, the September 29, 1997 submittal from the licensee proposes the same monitoring requirements for RACS, should contamination be detected, as is currently required for SACS.

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### 3.0 EVALUATION

As indicated in the September 29, 1997, application, the RACS is continuously monitored for contamination by instrument channels located at the discharge of the RACS pumps. In addition, the cooling tower blowdown line is also continuously monitored to detect any contamination that may be transferred to the SSWS. The alarm setpoints are selected in accordance with the Offsite Dose Calculation Manual to assure that total effective dose equivalent in unrestricted areas is below those limits stated in 10 CFR Part 20, Section 20.1301(a)(1). The licensee's analysis indicates that, should the RACS become contaminated, and a RACS heat exchanger tube rupture occur, the resulting total effective dose equivalent in unrestricted areas would be  $1.1E-5$ , a small fraction of the 10 CFR Part 20, Section 20.1301(a)(1) limits.

The NRC staff has reviewed the licensee's application and concludes that the radiation monitors provided by the licensee, together with the suitably conservative alarm setpoints, assures that operators can take action to limit the release of radioactive material to unrestricted areas to suitably low levels. Moreover, the sampling requirements in the proposed change to TS Table 4.11.1.1.1-1 assure that any release to the environment will be properly characterized. The NRC staff notes that the licensee is proposing a change to a TS that is part of the Radiological Effluent TSs (RETS). The RETS are no longer required to be part of the TSs and may be eliminated upon application by the licensee. This elimination from the TSs would not eliminate the requirements, which would be documented in the Offsite Dose Calculation Manual. Based upon the above, the proposed change to TS Table 4.11.1.1.1-1 is acceptable.

The licensee has also proposed an editorial change to TS Table 4.11.1.1.1-1. In Liquid Release Type B, the licensee is proposing that the acronym for Station Service Water System be changed from GSW to SSWS. This proposed change will be addressed in a future license amendment.

### 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 of use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. 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 (62 FR 52161). 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: D. H. Jaffe

Date: November 6, 1997