July 28, 1989

Docket No. 50-354

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

Dear Mr. Miltenberger:

SUBJECT: INCREASE TECHNICAL SPECIFICATION CHANNEL FUNCTIONAL TEST SURVEILLANCE INTERVALS FOR VARIOUS CONTROL ROD BLOCK INSTRUMENTATION (TAC NO. 73130)

Re: HOPE CREEK GENERATING STATION

The Commission has issued the enclosed Amendment No. 29 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 May 5, 1989.

This amendment increases the channel functional test surveillance intervals for various Control Rod Block instrumentation in accordance with General Electric Company Licensing Topical Report NEDC-30851P-A, Supplement 1.

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/

Clyde Shiraki, Project Manager
Project Directorate I-2
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 29 to
License No. NPF-57
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION w/enclosures:

Docket File	MO'Brien (2)	Wanda Jones	SVarga	NRC PDR
OGC	JCalvo	BBoger	Local PDR	DHagan
Tech Branch	Brent Clayton	PDI-2 Reading	EJordan	ACRS (10)
EWenzinger	WButler	BGrimes	CMiles, GPA/PA	SNewberry
CShiraki(3)/SBrown		TMeek (4)	RDiggs, ARM/LFMB	

[HC LETTER]

PDI-2/LA	PDI-2/PM	PDI-2/D	OGC	SICB
MO'Brien	CShiraki:tr	WButler	RBachmann	SNewberry
6/28/89	6/26/89	7/27/89	7/14/89	7/10/89
			w/changes to SE	

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

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See next page

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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 29
License No. NPF-57

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 (PSE&G) 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. 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. 29, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. PSE&G shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/S/

Walter R. Butler, 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: July 28, 1989

*Previously concurred

MR for	PDI-2/LA*	PDI-2/PM*	PDI-2/D	OGC*	SICB*
	MO'Brien	CShiraki:tr	WButler	RBachmann	SNewberry
	06/28/89	06/26/89	7/27/89	07/14/89	07/13/89

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

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler, 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: July 28, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 29

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. Overleaf page(s) provided to maintain document completeness.*

Remove	Insert
3/4 3-59*	3/4 3-59*
3/4 3-60	3/4 3-60

HOPE CREEK

3/4 3-59

Amendment No. 15 MAR 11 1986

TABLE 3.3.6-2
CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. ROD BLOCK MONITOR		
a. Upscale		
i. Flow Biased	$\leq$ 0.66 (w-Δw) + 40%[a]	$\leq$ 0.66 (w-Δw) + 43%[a]
ii. High Flow Clamped	$\leq$ 106%	$\leq$ 109%
b. Inoperative	NA	NA
c. Downscale	$\geq$ 5% of RATED THERMAL POWER	$\geq$ 3% of RATED THERMAL POWER
2. APRM		
a. Flow Biased Neutron Flux - Upscale	$\leq$ 0.66(w-Δw) + 42%[a]	$\leq$ 0.66(w-Δw) + 45%[a]
b. Inoperative	NA	NA
c. Downscale	$\geq$ 4% of RATED THERMAL POWER	$\geq$ 3% of RATED THERMAL POWER
d. Neutron Flux - Upscale, Startup	$\leq$ 12% of RATED THERMAL POWER	$\leq$ 14% of RATED THERMAL POWER
3. SOURCE RANGE MONITORS		
a. Detector not full in	NA	NA
b. Upscale	$\leq 1.0 \times 10^5$ cps	$\leq 1.6 \times 10^5$ cps
c. Inoperative	NA	NA
d. Downscale	$\geq$ 3 cps	$\geq$ 1.8 cps
4. INTERMEDIATE RANGE MONITORS		
a. Detector not full in	NA	NA
b. Upscale	$\leq$ 108/125 divisions of full scale	$\leq$ 110/125 divisions of full scale
c. Inoperative	NA	NA
d. Downscale	$>$ 5/125 divisions of full scale	$>$ 3/125 divisions of full scale
5. SCRAM DISCHARGE VOLUME		
a. Water Level-High (Float Switch)	109'1" (North Volume) 108'11.5" (South Volume)	109'3" (North Volume) 109'1.5" (South Volume)
6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW		
a. Upscale	$\leq$ 108% of rated flow	$\leq$ 111% of rated flow
b. Inoperative	NA	NA
c. Comparator	$\leq$ 10% flow deviation	$\leq$ 11% flow deviation
7. REACTOR MODE SWITCH SHUTDOWN POSITION	NA	NA

[a]The rod block function is varied as a function of recirculation loop flow (w) and Δw which is defined as the difference in indicated drive flow (in percent of drive flow which produces rated core flow) between two loop and single loop operation at the same core flow. The trip setting of the Average Power Range Monitor Rod Block function must be maintained in accordance with Specification 3.2.2.

TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION[a]	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. ROD BLOCK MONITOR				
a. Upscale	NA	Z[c][d], Q[c]	SA	1*
b. Inoperative	NA	Z[c][d], Q[c]	NA	1*
c. Downscale	NA	Z[c][d], Q[c]	SA	1*
2. APRM				
a. Flow Biased Neutron Flux - Upscale	NA	S/U[b], Q	SA	1
b. Inoperative	NA	S/U[b], Q	NA	1, 2, 5
c. Downscale	NA	S/U[b], Q	SA	1
d. Neutron Flux - Upscale, Startup	NA	S/U[b], Q	SA	2, 5
3. SOURCE RANGE MONITORS				
a. Detector not full in	NA	S/U[b], W	NA	2, 5
b. Upscale	NA	S/U[b], W	SA	2, 5
c. Inoperative	NA	S/U[b], W	NA	2, 5
d. Downscale	NA	S/U[b], W	SA	2, 5
4. INTERMEDIATE RANGE MONITORS				
a. Detector not full in	NA	S/U[b], W	NA	2, 5
b. Upscale	NA	S/U[b], W	SA	2, 5
c. Inoperative	NA	S/U[b], W	NA	2, 5
d. Downscale	NA	S/U[b], W	SA	2, 5
5. SCRAM DISCHARGE VOLUME				
a. Water Level-High (Float Switch)	NA	Q	R	1, 2, 5**
6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW				
a. Upscale	NA	S/U[b], Q	SA	1
b. Inoperative	NA	S/U[b], Q	NA	1
c. Comparator	NA	S/U[b], Q	SA	1
7. REACTOR MODE SWITCH SHUTDOWN POSITION	NA	R	NA	3, 4

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 29 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 May 5, 1989, Public Service Electric & Gas Company requested an amendment to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. The proposed amendment would increase the surveillance test intervals (STIs) for various Control Rod Block Function (CRBF) instrumentation in accordance with General Electric Company Licensing Topical Report (LTR) NEDC-30851P-A, Supplement 1.

2.0 EVALUATION

The proposed changes reflect those standard TS revisions contained in NEDC-30851P-A, Supplement 1 which, based upon probabilistic analyses, justify the identified time extensions by reducing the potential for: 1) unnecessary plant scrams, 2) excessive equipment test cycles, and 3) diversion of personnel and resources on unnecessary testing. The NRC reviewed the findings in the Technical Evaluation Report (TER) developed by Brookhaven National Laboratory. The staff concurs with the findings of the TER and finds that NEDC-30851P-A, Supplement 1 provides an acceptable basis for extending surveillance test intervals for control rod block functional instrumentation. The NRC staff approved the Licensing Topical Report in the letter and accompanying Safety Evaluation Report (SER), from C. E. Rossi (NRC) to D. N. Grace (BWR Owners' Group) dated September 22, 1988.

PSE&G has extended the generic analysis completed by the BWR Owners' Group to HCGS by completing the required plant specific analysis. As stated in the NRC's SER for Licensing Topical Report NEDC-30851P-A, Supplement 1, two issues must be addressed to justify the applicability of the generic analysis to individual plants when specific facility Technical Specifications are considered for revision.

1. Confirm the applicability of the generic analysis of NEDC-30851P-A, Supplement 1 to the plant.

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Licensing Topical Report NEDC-30851P-A, Supplement 1, Appendix B identifies PSE&G as a participating utility in the development of the Technical Specification Improvement Analysis for BWR Control Rod Block Function Instrumentation. In addition, Table 3-1 identifies HCGS as a plant which enforces the rod block function through the Reactor Manual Control System (RMCS). PSE&G has reviewed the assumptions and design details contained in the NEDC-30851P-A, Supplement 1 and concluded that the report is applicable to and bounds the design of HCGS. The staff agrees.

2. Confirm that any increase in instrument drift due to the extended STIs is properly accounted for in the setpoint calculation methodology. (For additional information on this issue, see letter from C. E. Rossi to R. F. Janecek, dated April 27, 1989).

The guidance provided in the Rossi to Janecek letter indicated that:

> "...licensees need only confirm that the setpoint drift which could be expected under the extended STIs has been studied and either (1) has been shown to remain within the existing allowance in the ...setpoint calculation or (2) that the allowance and setpoint have been adjusted to account for the additional expected drift.

The Rod Block Monitor and APRM trip functions were reviewed to determine whether the increased functional test interval affected the setpoint drift calculation. Calculation of the drift of these trip function setpoints is based upon their channel calibration interval of 6 months which is not affected by this proposed change. Similarly, the drift of the Scram Discharge Volume trip function setpoint is based upon its channel calibration interval of 550 days which is not affected by this proposed change. Therefore, the staff concludes that the setpoint drift for these three trip functions will remain within the existing allowance in the setpoint calculation when the channel functional test interval is increased from monthly to quarterly.

The drift of the Reactor Coolant System Recirculation Flow trip function setpoint is based upon the channel functional test interval which does vary with time. A review of the setpoint calculation with an increased surveillance interval, from monthly to quarterly, has been performed. Sufficient margin exists within the setpoint calculations to conclude that revisions to the current TS setpoints are not required. The drift that is expected under the extended STI will remain within the existing allowable margins.

In conclusion, the proposed increases in the STI for the identified trip functions do not require any corresponding changes in the Control Rod Block setpoints. This conclusion was reached because the drift

characteristics for the instrumentation with extended STIs are bounded by the current setpoint calculations. Hence, the staff concludes assumptions used in NEDC-30851P-A, Supplement 1 when the functional test interval is extended from monthly to quarterly can be applied to HCGS.

3.0 RESULTS OF EVALUATION

Based on the staff's review of the evaluation above, the staff finds that HCGS has met the plant specific conditions to apply the results of General Electric Company's Topical Report NEDC-30851P-A to the Hope Creek Generating Station, and the proposed amendment is acceptable.

4.0 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 or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (54 FR 25376) on June 14, 1989 and consulted with the State of New Jersey. No public comments were received, and the State of New Jersey 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: C. Y. Shiraki

Dated: July 28, 1989