

August 29, 1988

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: ROD BLOCK MONITOR SURVEILLANCE (TAC NO. 66170)

Re: HOPE CREEK GENERATING STATION

The Commission has issued the enclosed Amendment No. 18 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 September 2, 1987.

This amendment would modify the Technical Specification rod block monitor (RBM) surveillance requirements to change the time when RBM channel functional tests to demonstrate operability of the RBM channels are required to be performed.

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/

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

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Enclosures:

1. Amendment No. 18 to License No. NPF-57
2. Safety Evaluation

cc w/enclosures:
See next page

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

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Sincerely,

A handwritten signature in cursive script, appearing to read "George Rivenbark".

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

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cc w/enclosures:
See next page

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

Hope Creek Generating Station

cc:

M. J. Wetterhahn, Esquire
Conner & Wetterhahn
Suite 1050
1747 Pennsylvania Avenue
Washington, D.C. 20006

R. Fryling, Jr., Esquire
Law Department - Tower 5E
80 Park Place
Newark, New Jersey 07101

Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 241
Hancocks Bridge, New Jersey 08038

Mr. S. LaBruna
General Manager - Hope Creek Operations
Hope Creek Generating Station
P.O. Box 118
Hancocks Bridge, New Jersey 08038

Mr. B. A. Preston, Manager
Licensing and Regulation
Nuclear Department
P.O. Box 236
Hancocks Bridge, New Jersey 08038

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

Mr. David M. Scott, Chief
Bureau of Nuclear Engineering
Division of Environmental Quality
Department of Environmental Protection
State of New Jersey
CN 411
Trenton, New Jersey 08625



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. 18
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 September 2, 1987 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. 18, 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.

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: August 29, 1988

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8/1/88

PDI-2/D
WButler
8/29/88

BC:RSB
MHodges
8/12/88

BC:TSB
EButcher
8/12/88

OGC
R. Bachmann
8/24/88

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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: August 29, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 18

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 pages are provided to maintain document completeness.*

Remove

1-9*
1-10

3/4 3-59*
3/4 3-60

3/4 3-61
3/4 3-62*

Insert

1-9*
1-10

3/4 3-59*
3/4 3-60

3/4 3-61
3/4 3-62*

DEFINITIONS

TURBINE BYPASS SYSTEM RESPONSE TIME

- 1.47 The TURBINE BYPASS SYSTEM RESPONSE TIME consists of two separate time intervals: a) time from initial movement of the main turbine stop valve or control valve until 80% of the turbine bypass capacity is established, and b) the time from initial movement of the main turbine stop valve or control valve until initial movement of the turbine bypass valve. Either response time may be measured by any series of sequential, overlapping, or total steps such that the entire response time is measured.

UNIDENTIFIED LEAKAGE

- 1.48 UNIDENTIFIED LEAKAGE shall be all leakage which is not IDENTIFIED LEAKAGE.

UNRESTRICTED AREA

- 1.49 An UNRESTRICTED AREA shall be any area at or beyond the SITE BOUNDARY access to which is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials, or any area within the SITE BOUNDARY used for residential quarters or for industrial, commercial, institutional, and/or recreational purposes.

VENTILATION EXHAUST TREATMENT SYSTEM

- 1.50 A VENTILATION EXHAUST TREATMENT SYSTEM shall be any system designed and installed to reduce gaseous radiiodine or radioactive material in particulate form in effluents by passing ventilation or vent exhaust gases through charcoal adsorbers and/or HEPA filters for the purpose of removing iodines or particulates from the gaseous exhaust stream prior to the release to the environment. Such a system is not considered to have any effect on noble gas effluents. Engineered Safety Feature (ESF) atmospheric cleanup systems are not considered to be VENTILATION EXHAUST TREATMENT SYSTEM components.

VENTING

- 1.51 VENTING shall be the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating condition, in such a manner that replacement air or gas is not provided or required during VENTING. Vent, used in system names, does not imply a VENTING process.

TABLE 1.1
SURVEILLANCE FREQUENCY NOTATION

<u>NOTATION</u>	<u>FREQUENCY</u>
S	At least once per 12 hours.
D	At least once per 24 hours.
W	At least once per 7 days.
M	At least once per 31 days.
Q	At least once per 92 days.
SA	At least once per 184 days.
A	At least once per 366 days.
R	At least once per 18 months (550 days).
S/U	Prior to each reactor startup.
P	Prior to each radioactive release.
Z	During startup, prior to exceeding 30% of RATED THERMAL POWER, if not performed within the previous 7 days
N.A.	Not applicable.

**TABLE 3.3.6-2
CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS**

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

*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.

HOPE CREEK

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Amendment No. 15
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TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u> ^(a)	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
1. <u>ROD BLOCK MONITOR</u>				
a. Upscale	NA	Z ^{(c)(d)} , M ^(c)	SA	1*
b. Inoperative	NA	Z ^{(c)(d)} , M ^(c)	NA	1*
c. Downscale	NA	Z ^{(c)(d)} , M ^(c)	SA	1*
2. <u>APRM</u>				
a. Flow Biased Neutron Flux - Upscale	NA	S/U ^(b) , M	SA	1
b. Inoperative	NA	S/U ^(b) , M	NA	1, 2, 5
c. Downscale	NA	S/U ^(b) , M	SA	1
d. Neutron Flux - Upscale, Startup	NA	S/U ^(b) , M	SA	2, 5
3. <u>SOURCE RANGE MONITORS</u>				
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. <u>INTERMEDIATE RANGE MONITORS</u>				
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. <u>SCRAM DISCHARGE VOLUME</u>				
a. Water Level-High (Float Switch)	NA	M	R	1, 2, 5**
6. <u>REACTOR COOLANT SYSTEM RECIRCULATION FLOW</u>				
a. Upscale	NA	S/U ^(b) , M	SA	1
b. Inoperative	NA	S/U ^(b) , M	NA	1
c. Comparator	NA	S/U ^(b) , M	SA	1
7. <u>REACTOR MODE SWITCH SHUTDOWN POSITION</u>	NA	R	NA	3, 4

TABLE 4.3.6-1 (Continued)

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

NOTES:

- a. Neutron detectors may be excluded from CHANNEL CALIBRATION.
 - b. Within 24 hours prior to startup, if not performed within the previous 7 days.
 - c. Includes reactor manual control multiplexing system input.
 - d. Within 24 hours prior to exceeding 30% of RATED THERMAL POWER, if not performed within the previous 7 days.
- * With THERMAL POWER \geq 30% of RATED THERMAL POWER.
- ** With more than one control rod withdrawn. Not applicable to control rods removed per Specification 3.9.10.1 or 3.9.10.2.

INSTRUMENTATION

3/4.3.7 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.7.1 The radiation monitoring instrumentation channels shown in Table 3.3.7.1-1 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3.7.1-1.

ACTION:

- a. With a radiation monitoring instrumentation channel alarm/trip setpoint exceeding the value shown in Table 3.3.7.1-1, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION required by Table 3.3.7.1-1.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.1 Each of the above required radiation monitoring instrumentation channels shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the conditions and at the frequencies shown in Table 4.3.7.1-1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO.18 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 2, 1987, Public Service Electric & Gas Company (PSE&G) requested an amendment to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. The proposed amendment would modify the Technical Specification rod block monitor (RBM) surveillance requirement to change the time when RBM channel functional tests to demonstrate operability of the RBM channels are desired to be performed.

Technical Specification 3.1.4.3 requires that both RBM channels be operable in Operational Condition 1 whenever thermal power is greater than or equal to 30% of rated thermal power. Technical Specification 4.1.4.3 requires that the two required RBM channels be demonstrated to be operable by performance of channel functional tests and channel calibrations at the frequencies and for the Operational Conditions specified in Table 4.3.6-1. Table 4.3.6-1 specifies the Operational Condition as Condition 1 with thermal power greater than or equal to 30% of rated thermal power and specifies the frequency for performing channel functional tests as within 24 hours prior to startup if not performed within the previous 7 days and also monthly. PSE&G proposes to modify Table 4.3.6-1 to require that the channel functional tests demonstrating operability of the RBM channels be performed within 24 hours prior to exceeding 30% of rated power if not performed within the previous 7 days rather than within 24 hours prior to startup. It does not propose to change the monthly test requirement.

2.0 EVALUATION

The licensee, in its request, expresses the view that the current requirement to perform the channel functional tests prior to startup is in disagreement with the operability requirement that the channels be operable at power levels equal to or greater than 30% of rated thermal power and refers to its proposed change as a "correction". The licensee states that its proposed change, which it describes as removing differing

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sets of operability requirements, minimizes the potential for misinterpretation by the operator. It also states that by eliminating the requirement to test RBM's prior to startup and requiring instead that they be tested prior to 30% rated thermal power level, the proposed change will allow quicker startups.

We do not agree with the licensee that the current Technical Specification requirement to perform the channel functional tests prior to startup is in disagreement with the operability requirement and is incorrect. The current Hope Creek RBM operability and channel functional test requirements as specified in Hope Creek Technical Specification Sections 4.1.4.3 and Table 4.3.6-1 are consistent with the Standard Technical Specification for Boiling Water Reactors.

Since the RBM is not required to be operable until the power equals or exceeds 30% of rated thermal power and since both the current and the proposed Technical Specifications require that channel tests be performed to demonstrate operability of the RBM prior to achieving 30% of rated thermal power, both the current and proposed Technical Specifications provide assurance that the operability requirement is met. The proposed change, which would allow and require that the tests be performed closer to the time that the RBM system is actually required to be operational, is not expected to reduce the assurance that the system will be operable when required, and it may increase this assurance slightly. By removing the requirement that the tests be performed prior to startup and by allowing the tests to be performed after startup, the change provides greater flexibility in proceeding with the startup and a potential for reducing the time required to return the power following a shutdown.

On the basis of the above discussion, we conclude that this proposed change is acceptable.

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 or 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 37552) on October 7, 1987 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: G. Rivenbark

Dated: August 29, 1988.