

July 7, 1987

Docket No. 50-354

Mr. Corbin A. McNeill, Jr.
Senior Vice President - Nuclear
Public Service Electric and Gas
Company
P.O. Box 236
Hancocks Bridge, New Jersey 08038

Dear Mr. McNeill:

SUBJECT: REPLACEMENT OF INVERSE TIME DELAY VOLTAGE RELAYS (TAC NO. 64740)

Re: HOPE CREEK GENERATING STATION

The Commission has issued the enclosed Amendment No. 7 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 February 17, 1987, as supplemented by letter dated May 12, 1987.

This amendment revises TS Table 3.3.3-2 to reflect the replacement of the inverse time delay voltage relays with solid-state relays and to correct an editorial error.

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

Enclosures:

1. Amendment No. 7 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, reading "George W. Rivenbark", is written above the typed name.

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

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See next page

Mr. C. A. McNeill
Public Service Electric & Gas Co.

Hope Creek Generating Station

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Hancocks Bridge, New Jersey 08038



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. 7
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 February 17, 1987, as supplemented by letter dated May 12, 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. 7, 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.

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 7, 1987

LA: PDI-2:DRPI/II
M. Brien
06/1/87

PM: PDI-2:DRPI/II
GR: venbark:ca
06/1/87

OGC
J. Korman
06/10/87
D: PDI-2:DRPI/II
WButler
06/16/87

WB
7/7/87

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, reading "Walter R. Butler".

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 7, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 7

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 provided to maintain document completeness.*

Remove

3/4 3-37
3/4 3-38

Insert

3/4 3-37
3/4 3-38*

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. Reactor Water Level - Low Low Low, Level 1	>-129 inches*	>-136 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. ADS Timer	< 105 seconds	< 117 seconds
d. Core Spray Pump Discharge Pressure - High	145 psig	< 155 psig
		> 125 psig
e. RHR LPCI Mode Pump Discharge Pressure-High	125 psig	< 135 psig
		> 115 psig
f. Reactor Vessel Water Level-Low, Level 3	> 12.5 inches	> 11.0 inches
g. ADS Drywell Pressure Bypass Timer	< 5.0 minutes	< 5.5 minutes
h. ADS Manual Inhibit Switch	NA	NA
i. Manual Initiation	NA	NA
5. <u>LOSS OF POWER</u>		
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	a. 4.16 kv Basis - 2975 \pm 30 volts	2975 \pm 63 volts
	b. 120 v Basis - 85 \pm 0.85 volts	85 \pm 1.8 volts
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)**	a. 4.16 kv Basis - > 3857 volts	> 3857 volts
	b. 120 v Basis - > 110.2 volts	> 109.0 volts
	c. 20 sec @ 109.0 volts	20 \pm 15, - 5 sec @ 109.0 volts

* See Bases Figure B 3/4 3-1.

** This is a solid state voltage relay. The voltages shown are the minimum that will not result in a trip. Some voltage conditions will result in decreased trip times.

TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>ECCS</u>	<u>RESPONSE TIME (Seconds)</u>
1. CORE SPRAY SYSTEM	≤ 27
2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM	≤ 40
3. AUTOMATIC DEPRESSURIZATION SYSTEM	NA
4. HIGH PRESSURE COOLANT INJECTION SYSTEM	≤ 27
5. LOSS OF POWER	NA



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 7 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 February 17, 1987, Public Service Electric & Gas Company (the licensee) requested an amendment to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. The proposed amendment would revise Technical Specification Table 3.3.3-2 to change the description of the 4.16 kv Emergency Bus Undervoltage Relay for degraded voltage protection from an inverse time delay voltage relay to a solid state relay. In addition, an editorial change would be made to the footnote for the undervoltage trip setpoint and allowable value.

In response to staff questions, the licensee, by letter dated May 12, 1987, provided additional information in support of the February 17, 1987 request.

2.0 EVALUATION

The licensee proposes that the inverse time delay relays be replaced by solid state relays because the relays currently used tend to exceed the permissible time of 20+15, -5 seconds at 109.0 volts as specified in the Technical Specifications. The licensee proposes improved equipment rather than changing the Technical Specification allowable values. For the degraded voltage condition, the licensee proposes to use a combination of a solid state relay and an appropriate time delay relay (Agastat type) to meet the allowable values currently specified in the Technical Specifications. The modification will be qualified to Class 1E standards.

The staff's review of the licensee's submittal shows that, based on their characteristic curves, the proposed solid state voltage relays provide a more predictable response within the required response time than the existing inverse time relays. Hope Creek is currently using similar relays in other applications in the emergency diesel generator power supply panels with acceptable performance results. The manufacturer recommends that the relay calibration should be checked once a year. The Technical Specifications currently require that these relays be tested on a monthly basis during the channel functional test which is more conservative than the manufacturers recommendation.

The change of the word "maximum" to "minimum" in TS Table 3.3.3-2 is an editorial correction. The existing footnote refers to an undervoltage condition. The trip setpoints and allowable values are the minimum voltages that will not result in a trip. If the voltage decreases beyond the specified value, an undervoltage trip is initiated. The trip setpoint must be set higher than the specified values.

The staff review concluded that the proposed change would not relax the Technical Specification requirements for degraded voltage protection. The equipment currently used to satisfy the technical requirements will be replaced with equipment that can meet the existing Technical Specification performance requirements. The equipment proposed to be used to meet the Technical Specifications will be qualified to Class 1E Standards. The existing surveillance requirement for the inverse time relays will be satisfactory for the solid state relays proposed by the licensee. The editorial change proposed will improve the clarity of the Technical Specifications. Based upon the above findings, the staff concludes that the licensee's 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. 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 9583) on March 25, 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 Contributors: D. Florek and T. Koshy

Dated: July 7, 1987

July 7, 1987

MEMORANDUM FOR: Sholly Coordinator

FROM: Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

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Docket File
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MO'Brien (2)
OGC - Bethesda

SUBJECT: REQUEST FOR PUBLICATION IN MONTHLY FR NOTICE - NOTICE OF
TAC NO. 64740) ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

Public Service Electric & Gas Company, Docket No. 50-354, Hope Creek

Generating Station, Salem County, New Jersey

Date of application for amendment: February 17, 1987, as supplemented by
letter dated May 12, 1987. The May 12, 1987 letter furnished additional
information which did not affect the staff's preliminary evaluation.

Brief description of amendment: The amendment revised Technical Specification
Table 3.3.3-2 to reflect the replacement of the inverse time delay voltage
relays with solid-state relays and to correct an editorial error.

Date of issuance: July 7, 1987

Effective date: July 7, 1987

Amendment No. 7

Facility Operating License No. NPF-57. This amendment revised the Technical
Specifications.

Date of initial notice in Federal Register: March 25, 1987 (52 FR 9583)

The Commission's related evaluation of the amendment is contained in a Safety
Evaluation dated July 7, 1987.

No significant hazards consideration comments received: No

Local Public Document Room location: Pennsville Public Library, 190 S.

Broadway, Pennsville, New Jersey 08070

/s/

8707160225 870707
PDR ADDCK 05000354
P PDR

Walter R. Butler, Director
Project Directorate I-2
Division of Reactor Projects I/II

Previously concurred

PDI-2/LA*
MO'Brien
06/25/87

PDI-2/PM
GRivenbark:ca
06/17/87

PDI-2/D
WButler
06/17/87

OGC*
M. Karman
07/01/87



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

July 7, 1987

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Project Directorate I-2
Division of Reactor Projects I/II

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06/26/87

OGC
M. Karman
06/01/87
D: PDI-2: DRPI/II
WButler
06/26/87

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FROM: Walter R. Butler, Director
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Division of Reactor Projects I/II

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