

November 24, 1987

Docket No. 50-354

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

Dear Mr. McNeill:

SUBJECT: AIR STARTING RECEIVER PRESSURE (TAC NO. 66042)

Re: HOPE CREEK GENERATING STATION

The Commission has issued the enclosed Amendment No. 12 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 August 12, 1987.

This amendment reduces the emergency diesel generator air starting receiver minimum required pressure.

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

Enclosures:

- 1. Amendment No. 12 to License No. NPF-57
- 2. Safety Evaluation

cc w/enclosures:  
See next page

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D:PDI-2:DRPI/II  
WButler  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

November 24, 1987

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Senior Vice President - Nuclear  
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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

Enclosures:

1. Amendment No. 12 to License No. NPF-57
2. Safety Evaluation

cc w/enclosures:  
See next page

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

Hope Creek Generating Station

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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. 12  
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 August 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. 12, 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  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 24, 1987

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M. Butler  
11/5/87

PM PDI-2:DRPI/II  
GR Venbark:CA  
11/5/87

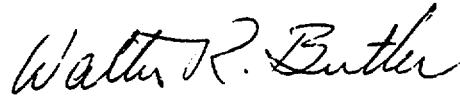
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BC:SPLD:EAD  
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See concurrence page of  
cover letter for SPLD's  
concurrence dated 11/10/87

3. This license amendment is effective as of its date 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: November 24, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 12

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 page is identified by Amendment number and contains vertical lines indicating the area of change. Overleaf page is provided to maintain document completeness.\*

Remove

3/4 8-5  
3/4 8-6\*

Insert

3/4 8-5  
3/4 8-6\*

## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
  7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to 325 psig.
  8. Verifying the lube oil pressure, temperature and differential pressure across the lube oil filters to be within manufacturer's specifications.
- b. At least once per 31 days by visually examining a sample of lube oil from the diesel engine to verify absence of water.
  - c. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the fuel oil day tank.
  - d. At least once per 92 days by removing accumulated water from the fuel oil storage tanks.
  - e. At least once per 31 days by performing a functional test on the emergency load sequencer to verify operability.
  - f. At least once per 92 days and from new fuel oil prior to addition to the storage tanks by obtaining a sample in accordance with ASTM-D270-1975 and by verifying that the sample meets the following minimum requirements and is tested within the specified time limits:
    1. As soon as sample is taken or from new fuel prior to addition to the storage tank, as applicable, verify in accordance with the tests specified in ASTM-D975-77 that the sample has:
      - a) A water and sediment content of less than or equal to 0.05 volume percent.
      - b) A kinematic viscosity @ 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes or a Saybolt Second Universal (SSU) viscosity at 100°F of greater than or equal to 32 SSU but less than or equal to 40.1 SSU.
      - c) A specific gravity as specified by the manufacturer as API gravity @ 60°F of greater than or equal to 28 degrees but less than or equal to 42 degrees.
    2. Within one week after obtaining the sample, verify an impurity level of less than 2 mg of insolubles per 100 ml. when tested in accordance with ASTM-D2274-70.



## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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3. Within 2 weeks after obtaining the sample, verify that the other properties specified in Table 1 of ASTM-D975-77 and Regulatory Guide 1.137, Position 2.a, are met when tested in accordance with ASTM-D975-77.
  
- g. At least once per 2 months, by verifying the buried fuel oil transfer piping's cathodic protection system is OPERABLE and at least once per year by subjecting the cathodic protection system to a performance test.
  
- h. At least once per 18 months#, during shutdown, by:
  1. Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.
  2. Verifying the diesel generator capability to reject a load of greater than or equal to that of the RHR pump motor (1003 kW) for each diesel generator while maintaining voltage at  $4160 \pm 420$  volts and frequency at  $60 \pm 1.2$  Hz.
  3. Verifying the diesel generator capability to reject a load of 4430 kW without tripping. The generator voltage shall not exceed 4580 volts during and following the load rejection.
  4. Simulating a loss of offsite power by itself, and:
    - a) Verifying loss of power is detected and deenergization of the emergency busses and load shedding from the emergency busses.
    - b) Verifying the diesel generator starts\* on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds after receipt of the start signal, energizes the autoconnected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at  $4160 \pm 420$  volts and  $60 \pm 1.2$  Hz during this test.

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\*This diesel generator start (10 sec) and subsequent loading (130 sec) from ambient conditions may be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical stress and wear on the diesel engine is minimized.

#For any start of a diesel generator, the diesel must be loaded in accordance with the manufacturer's recommendations.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO.12 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 August 12, 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 the Technical Specifications requirement for emergency diesel generator air starting receiver minimum pressure. The current Technical Specification requires an emergency diesel generator air starting receiver minimum pressure of 380 psig. The proposed amendment would change this minimum required pressure to 325 psig. The licensee states in its request:

The present Technical Specification Section 4.8.1.1.2.a.7 minimum value of 380 PSIG was erroneously selected as the minimum air start receiver pressure. The limit selected should have been the low pressure alarm setpoint of 325 PSIG, as described in the FSAR, not the compressor normal cycling setpoint of 380 PSIG.

2.0 EVALUATION

The acceptance criteria related to the minimum required pressure of the starting air receivers are stated in items 4g and 4h of Standard Review Plan Section 9.5.6 "Emergency Diesel Engine Starting System." These are:

- a. As a minimum, the air starting system should be capable of cranking a cold diesel engine five times without recharging the receiver(s). The air starting system capacity should be determined as follows: (1) each cranking cycle duration should be approximately 3 seconds; (2) consist of two to three engine revolutions; or (3) air start requirements per engine start provided by the engine manufacturer; whichever air start requirement is larger.
- b. Alarms should be provided which alert operating personnel if the air receiver pressure falls below the minimum allowable value.

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FSAR Section 9.5.6 and the licensee's response to FSAR Question 430.122 describe the air starting system as capable of performing its function in conformance with Standard Review Plan Section 9.5.6 when the air starting receiver pressure is at the low pressure alarm setpoint of 325 PSIG. The licensee's August 12, 1987 submittal reports that the FSAR statements pertaining to the air starting system were verified during the Hope Creek Preoperational Test Program.

Based on the above information, we conclude that the proposed Technical Specification minimum air start receiver pressure of 325 psig is adequate, conforms with the Standard Review Plan acceptance criteria and 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 37551) 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: November 24, 1987