February 4, 1

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 VOLTAGE LIMIT WHEN PERFORMING EMERGENCY DIESEL GENERATOR FULL LOAD REJECTION TEST, HOPE CREEK GENERATING STATION (TAC NO. M86473)

The Commission has issued the enclosed Amendment No. 65 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 21, 1993 and supplemented on August 23, 1993.

This amendment revises a Technical Specifications surveillance requirement to increase the voltage limit from 4580 to 4785 volts when performing the 18-month emergency diesel generator full load rejection test.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

You are requested to inform the NRC, in writing, when this amendment has been implemented.

Sincerely,
/S/
James C. Stone, Senior 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. 65 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. 20555-0001

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Division of Reactor Projects - I/II
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cc w/enclosures:
See next page

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

Hope Creek Generating Station

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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. 65
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 21, 1993, and supplemented on August 23, 1993, 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. 65 , 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.

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3. The license amendment is effective as of its date of issuance and shall be implemented upon restart following the fifth refueling outage currently scheduled to begin on March 5, 1994.

FOR THE NUCLEAR REGULATORY COMMISSION

Charles L. Miller

Charles L. Miller, 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: February 4, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 65

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 areas of change. Overleaf page provided to maintain document completeness.*

Remove	Insert
3/4 8-5	3/4 8-5*
3/4 8-6	3/4 8-6

SURVEILLANCE REQUIREMENTS (Continued)

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. Deleted

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 ± 420 volts and frequency at 60 ± 1.2 Hz.

3. Verifying the diesel generator capability to reject a load of 4430 kW without tripping. The generator voltage shall not exceed 4785 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 ± 420 volts and 60 ± 1.2 Hz during this test.

*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.

SURVEILLANCE REQUIREMENTS (Continued)

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-D4057 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.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 65 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 21, 1993, as supplemented on August 23, 1993, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Hope Creek Generating Station, Technical Specification (TS). The requested changes would revise a Technical Specifications surveillance requirement to increase the voltage limit from 4580 to 4785 volts when performing the 18-month emergency diesel generator (EDG) full load rejection test. The August 23, 1993, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 DESCRIPTION

The licensee's request would revise surveillance requirement 4.8.1.1.2.h.3 to increase the voltage limit to 4785 volts when performing the 18-month EDG full load rejection test. The "##" and corresponding footnote applicable to Section 4.8.1.1.2.h would also be deleted.

The current TS limit the maximum voltage when performing the continuous rating load rejection test on the EDGs to 4580 volts both during and after the surveillance.

3.0 EVALUATION

Surveillance 4.8.1.1.2.h.3 is intended to demonstrate the EDGs' capability to reject a full load without overspeed tripping or exceeding the predetermined voltage limits. An EDG full load rejection may occur because of a system fault or inadvertent breaker tripping. This surveillance ensures proper EDG response under the simulated test conditions. This test simulates the loss of the total connected load that the EDG experiences following a full load rejection and verifies that the EDG does not trip upon loss of the load. The acceptance criteria ensure that the EDG is not degraded for future application, including reconnection to the bus, if the cause of the EDG bus trip can be corrected or isolated.

The staff reviewed the licensee's proposal to determine if the EDGs could be damaged by the increased allowable voltage. In its original submittal, the

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licensee stated that there would be no detrimental effects on the generator if 4785 volts would be experienced. The licensee also stated that during the initial manufacturer's acceptance test, a high-pot on the generator was performed with a voltage of 1.5 times the nominal rating (6240 volts) applied to the unit.

During a telephone call, the staff questioned the effect on the generator and components upstream of the EDG output breaker from a 15% voltage spike. In an August 23, 1993 letter, the licensee responded that the effects were evaluated and found to be negligible.

The staff reviewed the licensee's submittals against the guidance of Standard Review Plan 8.3.1, and Regulatory Guide 1.9 (Revision 3); and the requirements of General Design Criteria 17, "Electric Power Systems," and 18, "Inspection and Testing of Electric Power Systems." Based on its review, the staff finds that the licensee's proposal complies with the guidance and requirements listed above and will not adversely effect the operability of the EDGs. Therefore, the licensee's proposal is acceptable.

The "##" footnote on TS page 3/4 8-6 pertained to a one time surveillance interval extension for the 1AG400 and 1DG400 Emergency Diesel Generators. This extension is no longer applicable since it expired on October 15, 1989. This is an editorial revision to the TS and the staff finds it acceptable.

3.0 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.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. 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 (58 FR 34091). 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.

5.0 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: S. Dembek

Date: February 4, 1994