



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. 92
License No. NPF-57

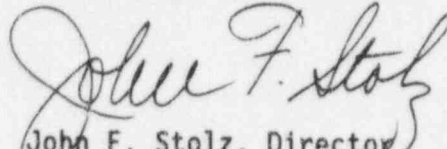
1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Public Service Electric & Gas Company (PSE&G) dated October 7, 1995, as supplemented by letter dated October 27, 1995, complies with the standards and requirements of the 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. 92, 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.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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 6, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 92

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.

<u>Remove</u>	<u>Insert</u>
3/4 8-4	3/4 8-4
3/4 8-6	3/4 8-6
3/4 8-7	3/4 8-7
3/4 8-9	3/4 8-9
B 3/4 8-2	B 3/4 8-2
B 3/4 8-3	B 3/4 8-3

ELECTRICAL POWER SYSTEMS
SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:*

a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the fuel oil day tank.
2. Verifying the fuel level in the fuel oil storage tank.
3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the fuel oil day tank.
4. Verify each diesel generator starts from standby conditions and achieves ± 3950 volts and ± 58.8 Hz in ≤ 10 seconds after receipt of the start signal, and subsequently achieves steady state voltage of 4160 ± 420 volts and frequency of 60 ± 1.2 Hz. The diesel generator shall be started for this test by using one of the following signals:
 - a) Manual.
 - b) Simulated loss of offsite power by itself.
 - c) Simulated loss of offsite power in conjunction with an ESF actuation test signal.
 - d) An ESF actuation test signal by itself.
5. Verifying the diesel generator is synchronized, loaded to between 4300 and 4400** kw in less than or equal to 130 seconds,* and operates with this load for at least 60 minutes.

* The diesel generator start (10 sec) and subsequent loading (130 sec) from standby conditions shall be performed at least once per 184 days in these surveillance tests. All engine starts and loading for the purpose of this surveillance testing 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.

** This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band shall not invalidate the test; the loads, however, shall not be less than 4300 kw nor greater than 4430 kw.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- g. Deleted.
- h. At least once per 18 months^f, during shutdown, by:
 - 1. Deleted.
 - 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 standby 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 may be loaded in accordance with the manufacturer's recommendations.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

5. Verifying that on an ECCS actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The diesel generator shall achieve ≈ 3950 volts and ≈ 58.8 Hz in ≤ 10 seconds following receipt of the start signal and subsequently achieve steady state voltage of 4160 ± 420 volts and frequency of 60 ± 1.2 Hz.
6. Simulating a loss of offsite power in conjunction with an ECCS actuation test signal, 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 emergency 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.
7. Verifying that all automatic diesel generator trips, except engine overspeed, generator differential current, generator overcurrent, bus differential current and low lube oil pressure are automatically bypassed upon loss of voltage on the emergency bus concurrent with an ECCS actuation signal.#
8. Deleted.
9. Verifying that the auto-connected loads to each diesel generator do not exceed the continuous rating of 4430 kW.

*This diesel generator start (10 sec) and subsequent loading (130 sec) from standby 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.

#Generator differential current, generator overcurrent, and bus differential current is two-out-of-three logic and low lube oil pressure is two-out-of-four logic.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

2. Performing a pressure test of those portions of the diesel fuel oil system designed to Section III, subsection ND of the ASME Code in accordance with ASME Code Section XI Article IWD-5000.
- k. At least once per refueling cycle# by:
1. Verifying the diesel generator operates for at least 24 hours. During the first 22 hours of this test, the diesel generator shall be loaded to between 4300 and 4400 kW## and during the remaining 2 hours of this test, the diesel generator shall be loaded to between 4800 and 4873 kW. The diesel generator shall achieve ≥ 3950 volts and ≥ 58.8 Hz in ≤ 10 seconds following receipt of the start signal and subsequently achieve steady state voltage of 4160 ± 420 volts and frequency of 60 ± 1.2 Hz.
 2. Within 5 minutes after completing 4.8.1.1.2.k.1, verify each diesel generator starts and achieves ≥ 3950 volts and ≥ 58.8 Hz in ≤ 10 seconds after receipt of the start signal, and subsequently achieves steady state voltage of 4160 ± 420 volts and frequency of 60 ± 1.2 Hz.

- OR -

Operate the diesel generator between 4300 kW and 4400 kW for two hours. Within 5 minutes of shutting down the diesel generator, verify each diesel generator starts and achieves ≥ 3950 volts and ≥ 58.8 Hz in ≤ 10 seconds after receipt of the start signal, and subsequently achieves steady state voltage of 4160 ± 420 volts and frequency of 60 ± 1.2 Hz. This test shall continue for at least five minutes.

4.8.1.1.3 Reports - All diesel generator failures, valid or non-valid, shall be reported to the Commission within 30 days pursuant to Specification 6.9 2. Reports of diesel generator failures shall include the information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977. If the number of failures in the last 100 valid tests, on a per nuclear unit basis, is greater than or equal to 7, the report shall be supplemented to include the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977.

4.8.1.1.4 The buried fuel oil transfer piping's cathodic protection system shall be demonstrated OPERABLE at least once per 2 months and at least once per year by subjecting the cathodic protection system to a performance test.

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

##This band is meant as guidance to avoid routine overloading of the engine. Loads in excess of this band shall not invalidate the test; the loads; however, shall not be less than 4300 kW nor greater than 4873 kW.

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

The minimum voltage and frequency stated in the Surveillance Requirements (SRs) are those necessary to ensure the EDG can accept Design Basis Accident loading while maintaining acceptable voltage and frequency levels. Stable operation at the nominal voltage and frequency values is also essential to establishing EDG OPERABILITY, but a time constraint is not imposed. This is because a typical EDG will experience a period of voltage and frequency oscillations prior to reaching steady state operation if these oscillations are not dampened out by load application. This period may extend beyond the 10 second acceptance criteria and could be a cause for failing the SR (for example if a significant negative trend develops). In lieu of a time constraint in the SR, PSE&G will monitor and trend the actual time to reach steady state operation as a means of ensuring there is no voltage regulator or governor degradation which could cause an EDG to become inoperable.

The surveillance requirements for demonstrating the OPERABILITY of the unit batteries are in accordance with the recommendations of Regulatory Guide 1.129 "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants", February 1978 and IEEE Std 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 4.8.2.1-1 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and .015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than .020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than .010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS (Continued)

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 4.8.2.1-1 is permitted for up to 31 days. During this 31 day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than .020 below the manufacturer's recommended full charge specific gravity ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity, ensures that an individual cell's specific gravity will not be more than .040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function; (5) the TABLE 4.8.2.1-1 NOTATION 31 day ACTION time was derived taking into consideration that while battery capacity is degraded, sufficient capacity exists to perform the intended function while providing a time period adequate to permit full restoration of the battery cell parameters to normal limits.

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Primary containment electrical penetrations and penetration conductors are protected by demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers by periodic surveillance.

The surveillance requirements applicable to lower voltage circuit breakers provides assurance of breaker reliability by testing one representative sample of each manufacturers brand of circuit breaker. Each manufacturer's molded case and metal case circuit breakers are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers are tested. If a wide variety exists within any manufacturer's brand of circuit breakers, it is necessary to divide that manufacturer's breakers into groups and treat each group as a separate type of breaker for surveillance purposes.

The OPERABILITY or bypassing of the motor operated valves thermal overload protection continuously or during accident conditions by integral bypass devices ensures that the thermal overload protection during accident conditions will not prevent safety related valves from performing their function. The Surveillance Requirements for demonstrating the OPERABILITY or bypassing of the thermal overload protection continuously or during accident conditions are in accordance with Regulatory Guide 1.106 "Thermal Overload Protection for Electric Motors on Motor Operated Valves", Revision 1, March 1977.