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Electric and Gas
Company

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OCT 07 1995

LR-N95173

LCR 95-23

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

**LICENSE AMENDMENT APPLICATION
REVISION OF SURVEILLANCE 4.8.1.1.2
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354**

This letter submits an application for amendment to Appendix A of Facility Operating License NPF-57 for the Hope Creek Generating Station, and is being filed in accordance with 10CFR50.90. Pursuant to the requirements of 10CFR50.91(b)(1), a copy of this request for amendment has been sent to the State of New Jersey.

The proposed Technical Specification change revises Surveillance Requirement 4.8.1.1.2, pertaining to testing of Emergency Diesel Generators (EDGs) to be consistent with the applicable licensing documents used for the development of the EDG surveillances.

Specifically, this License Change Request eliminates the voltage and frequency bands now specified to be met for the unloaded start time testing and replaces them with minimum values. The change clarifies any need to ensure stabilization of voltage and frequency within ten seconds. This stabilizing criteria, however, is maintained during steady state operation of the EDGs. This request does not change the intent of the current Technical Specification as described in design basis documents, but provides a more explicit statement of the testing requirement.

The implementation of this change will eliminate unnecessary Limiting Condition for Operation (LCO) entry, prevent unnecessary diesel testing due to unnecessary timing criteria, and ensure consistent timing results that can be trended for EDG degradations.

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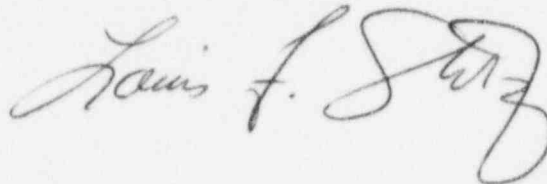
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The proposed change has been evaluated in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c), and it has been determined that this request involves no significant hazards considerations.

A description of the requested amendment, supporting information and analyses for the change, and the basis for a no significant hazards consideration determination are provided in Attachment 1. The Technical Specification pages affected by the proposed change are provided in Attachment 2 with pen and ink changes.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,

A handwritten signature in cursive script, appearing to read "Louis F. Stutz". The signature is written in dark ink and is positioned below the word "Sincerely,".

Affidavit

Attachments (2)

OCT 07 1995

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ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATION CHANGE
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NO. NPF-57
DOCKET NO. 50-354

I. Description of Change

The proposed change to the Emergency Diesel Generator (EDG) surveillance requirements would ensure consistency between the required testing methodology and the current licensing basis and would prevent unwarranted EDG governor control adjustments in the unloaded configuration.

Hope Creek Technical Specifications (TSS) 4.8.1.1.2.a.4, 4.8.1.1.2.h.5, 4.8.1.1.2.k.1 and 4.8.1.1.2.k.2 would be revised to replace the reference to a voltage and frequency band for the 10 second starting time test with a minimum required voltage and frequency that must be attained within 10 seconds.

The change proposes the following:

1) For each of the referenced specifications, 4160 ± 420 volts is deleted and replaced with ≥ 3950 volts.

For each of the referenced specifications, 60 ± 1.2 Hz is deleted and replaced with ≥ 58.8 Hz.

For each of the referenced specifications "generator voltage and frequency shall be" is replaced with "generator voltage and frequency shall attain".

2) Since it remains desirable to ensure control stability during steady state test conditions and since the specified voltage and frequency bands are to be deleted by the above change, it is also proposed that the phrase "within these limits" be replaced with "at 4160 ± 420 volts and 60 ± 1.2 Hz." for specifications 4.8.1.1.2.h.5 and 4.8.1.1.2.k.1.

For specification 4.8.1.1.2.k.2 (two places), the phrase "the steady state generator voltages and frequencies shall be maintained at 4160 ± 420 volts and 60 ± 1.2 Hz" is inserted after the existing phrase "...at least five minutes" for consistency with other specifications pertaining to unloaded starts.

The word attain will replace achieve to be consistent with the statement in the UFSAR, section 8.3.1.1.3.10.

II. Reason for the Proposed Change

Until recently, EDG start time requirements were believed to be satisfied by meeting the lower end of the specified voltage and frequency band. This was considered to be in compliance with the surveillance requirements. As a result of a recent reassessment of procedure adequacy by the Hope

Creek plant staff, the monthly surveillance test procedures were revised to require the voltage and frequency to be stabilized in the stated band within 10 seconds. In some instances, to satisfy this newly identified criteria for timing, it has been necessary to make minor adjustments to the diesel governor. This measure does not optimize diesel generator performance since the unloaded stabilization is not necessarily representative of the emergency configuration (i.e, loading upon reaching established voltage and frequency values).

The proposed change ensures the testing methodology aligns with the licensing basis in order to prevent unwarranted EDG governor control adjustments in the unloaded configuration.

This change will eliminate timing to a voltage and frequency band for those surveillance requirements that time the diesel generator start in an unloaded configuration. This will permit consistent, trendable timing results and will eliminate making unnecessary adjustments to the governor between the 18 month loaded tests. The 18 month loaded surveillance tests, representative of the emergency configuration, will continue to require timing to the specified voltage and frequency band.

III. Justification for the Proposed Change

The intent of the surveillance requirements which start-time the diesel generators in an unloaded configuration is to ensure they can attain rated frequency and voltage and be able to accept load within 10 seconds. The proposed change is consistent with this intent.

Current settings for speed and voltage interlocks on the diesel generator closure correspond to a frequency of 57 Hz and a voltage of 3950 volts. At these values, coincident with an undervoltage condition on the respective 4160 volt bus, the diesel generator breaker would close and assume loading. The value for frequency selected for this LCR provides conservatism. Both frequency and voltage values are within the existing bands in the specifications.

The proposed change aligns the testing methodology with the licensing basis in order to prevent unwarranted EDG control adjustments in the unloaded configuration. This is confirmed by review of the licensing basis documents outlined below.

UFSAR Section 8.3.1.1.3.10 specifies that "The diesel generators are designed to start and attain rated voltage and frequency within 10 seconds of the receipt of the start signal".

UFSAR Table 8.3-1 specifies that "loads are assumed to start and run after 13 seconds".

UFSAR Table 6.3-1 specifies "approximately 15 seconds all SDGs are ready to load".

In UFSAR Section 1.8 it is stated that the diesel generators meet the intent of Regulatory Guide 1.108, Revision 1 with some exceptions. None of the exceptions stated relate to timing for voltage and frequency. Regulatory Guide 1.108, Revision 1 contains no requirement to wait until the voltage and frequency stabilize when timing the diesel generator start.

In this same section it is stated that Regulatory Guide 1.9 is not applicable, per its implementation section, but that "HCGS complies with IEEE 387-1977 as endorsed and modified by Regulatory Guide 1.9...".

IEEE 387-1977 section 6.4, Site Test Categories, discusses a "starting test" that "demonstrates the capability to attain and stabilize frequency and voltage within the acceptable limits and time". Section 6.6, Periodic Testing, specifies two types of tests: an "availability test" and an "operational test". The "availability test", which corresponds to our monthly surveillance tests, is intended to "demonstrate its continued availability". This test starts the diesel generator, but has no requirement for timing, (i.e. it does not include the "starting test"). The "operational test" does include a "starting test" but this test is in the context of the 18 month or refueling outage loaded tests to "demonstrate continued capability of performing its required function".

PSE&G also finds that the Surveillance Requirements align with IEEE 387-1977 in that the 18 month surveillances simulate a full range of scenarios comparable to that expected during accident conditions in order to demonstrate full capability to perform as assumed in the accident analysis (operational test) while the unloaded start tests demonstrate availability.

This proposed change ensures surveillance requirements 4.8.1.1.2.a.4, 4.8.1.1.2.h.5, 4.8.1.1.2.k.1 and 4.8.1.1.2.k.2 reflect the design basis, and provide for correct, consistent timing methodology.

IV. Significant Hazards Consideration

Public Service Electric & Gas has, pursuant to 10CFR50.92, reviewed the proposed changes to determine whether this change involves a significant hazards consideration. PSE&G

has determined that operation of Hope Creek in accordance with the proposed change:

1. **Will not involve a significant increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated.**

Since no change is being made to the offsite power supplies, or to any system or component that interfaces with the offsite power supplies, there is no change in the probability of a Loss of Offsite Power Accident.

Since the proposed change still ensures the surveillance requirements meet the licensing basis and since the full spectrum of loading, unloading and standby testing performed at the 18 month frequency continues to demonstrate the capability of the diesel generators to satisfy onsite power requirements during simulated accident conditions while the monthly testing demonstrates availability, there is no change in the consequences of an accident.

Since the proposed change will eliminate unnecessary adjustments to the governor controls, the probability of malfunction is potentially reduced.

This change ensures the surveillance requirements reflect the design basis and provide a basis for consistent timing methodology. Since the proposed change is consistent with the intent of the existing specifications, and with the design basis of the system and since no physical changes are being proposed, no action will occur that will increase the probability or consequences of an accident or malfunction of equipment important to safety. The Diesel Generators will continue to function as stated in the UFSAR.

Therefore the proposed change will not involve a significant increase in the probability or consequences of an accident or malfunction of equipment important to safety previously evaluated.

2. **Will not create the possibility of a new or different kind of accident from any previously evaluated.**

The proposed change does not result in any design or physical configuration changes to the offsite power supplies or to the diesel generators. Operation in accordance with the proposed change will not impair the diesel generators ability to perform as provided in the design basis. By eliminating unnecessary adjustments to the diesel generator governor control, performance during any accident is

potentially enhanced. The diesel generators will continue to function as stated in the UFSAR. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

3. **Will not involve a significant reduction in a margin of safety.**

Since the proposed change does not involve the addition or modification of plant equipment, is consistent with the intent of the existing Technical Specifications, meets the intent of applicable Regulatory Guides, and is consistent with the design basis of the Diesel Generators and the UFSAR, no action will occur that will involve a significant reduction in a margin of safety.

4. **Conclusion**

Based upon the above, PSE&G has determined that the proposed change to the Technical Specifications Bases does not involve a Significant Hazards Consideration.

ATTACHMENT 2

INSERTS AND MARKED-UP PAGES

TECHNICAL SPECIFICATIONS CHANGE
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NO. MPF-57
DOCKET No. 50-354