

Public Service
Electric and Gas
Company

Stanley LaBruna

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Vice President - Nuclear Engineering

NOV 23 1994

NLR-N94190

Reference: LCR 93-12

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Gentlemen:

REQUEST FOR AMENDMENT
ELECTRICAL POWER SYSTEMS
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

Public Service Electric and Gas Company (PSE&G) hereby transmits an application to amend Appendix A of Facility Operating License No. NPF 57 for the Hope Creek Generating Station (HCGS) in accordance with 10CFR50.90. Pursuant to the requirements of 10CFR50.91(b)(1), PSE&G has provided a copy of this amendment request to the State of New Jersey. This request would revise Technical Specifications Section 4.8.2.1, ELECTRICAL POWER SYSTEMS, SURVEILLANCE REQUIREMENTS, and associated BASES Section B3/4.8.2.

A description of the requested changes, supporting information and analyses for the changes, 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 marked-up in Attachment 2.

Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance, but implementable within 60 days to provide sufficient time for associated administrative activities.

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

Sincerely,



Attachments
Affidavit

C Mr. T. T. Martin, Administrator
USNRC Region I

Mr. D. Moran
USNRC Licensing Project Manager

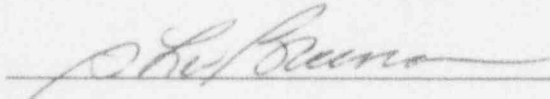
Mr. R. Summers
USNRC Senior Resident Inspector

Mr. K. Tosch, Manager IV
Bureau of Nuclear Engineering
New Jersey Department of Environmental Protection


STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

Stanley LaBruna, being duly sworn according to law deposes and says:

I am Vice President - Nuclear Engineering of Public Service Electric and Gas Company, and as such, I find the matters set forth in our letter, referenced above, concerning the Hope Creek Generating Station, are true to the best of my knowledge, information and belief.



Subscribed and Sworn to before me
this 23rd day of November, 1994



Notary Public of New Jersey

KIMBERLY JO BROWN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires April 21, 1998

Ref: LCR 93-12

ATTACHMENT 1

PROPOSED TECHNICAL SPECIFICATIONS CHANGE

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Ref: LCR 93-12

I. DESCRIPTION OF THE CHANGE

As shown on the marked-up Technical Specifications pages in Attachment 2:

- ♦ Change surveillance requirement 4.8.2.1.b from "...with battery terminal voltage below 105 volts for a 125-volt battery..." to read, "...with battery terminal voltage below 108 volts for a 125-volt battery..."
- ♦ Remove (*) at end of 4.8.2.1.c.4 and corresponding (*) footnote
- ♦ Delete surveillance requirement 4.8.2.1.d.2 and reword the portion of surveillance requirement 4.8.2.1.d.1 that reads, "...the actual emergency loads for the design duty cycle..." to read, "...the actual or simulated emergency loads for the design duty cycle ...". On page 3/4 8-14, combine the resultant 4.8.2.1.d with requirements 4.8.2.1.e and 4.8.2.1.f from the following page and bring Table 4.8.2.1-1 up to page 3/4 8-15, leaving page 3/4 8-16 intentionally blank.
- ♦ Revise Table 4.8.2.1-1 as indicated in the attached marked-up pages to agree more closely with Improved BWR4 SIS format, ACTIONS, and BASES.

The A.C. SOURCES, D.C. SOURCES and ONSITE POWER DISTRIBUTION SYSTEMS bases will be revised, as indicated in the attached mark-up, to reflect the above changes to the technical specifications.

II. REASON FOR THE CHANGE

During the Hope Creek Electrical Distribution System Functional Inspection (EDSFI), a review of the Hope Creek DC systems voltage drop studies revealed that at the end of the 4-hour duty cycle for the Class-1E batteries, the minimum specified voltages of 105 VDC and 210 VDC at the battery terminals for the 125 V and 250 V DC systems may not be adequate to support certain DC loads. A new voltage drop study (E-1.4(Q), Rev. 3, "Hope Creek 125V & 250V Class 1E DC System Short Circuit and Voltage Drop Studies") was performed using more precise and conservative load current values. The results of this study show that the minimum acceptable battery terminal voltage for the 125 VDC system will need to be raised from the present level of 105VDC to 108VDC in order to support proper operation of the connected loads. For the 250VDC system, the present minimum battery terminal voltage of 210VDC was determined to be adequate and does not have to be revised. Load profile values from the latest battery sizing calculations, are located in the UFSAR and in surveillance testing procedures; therefore, in accordance with the guidance of Generic Letter 91-08, the load profile table is being removed from the TS.

The (*) footnote at the bottom of page 3/4 8-13 applied to "prior to startup after the first refueling outage", is no longer current and, therefore, should be removed. TABLE 4.8.2.1-1 is redrawn to incorporate CATEGORY C and the table notation section has been reordered for clarity and closer conformance with the improved BWR4 Standard Technical Specifications (STS).

III. JUSTIFICATION FOR THE CHANGE

Battery sizing calculations E-4.1(Q), "Hope Creek Class 1E 125VDC Station Battery and Charger Sizing," and E-5.1(Q), "Hope Creek Class 1E 250VDC Station Battery and Charger Sizing," were revised to demonstrate that the existing batteries are of sufficient capacity to meet the design load profile for a design duty cycle of 4-hours at a required minimum voltage for the proper operation of the connected loads. The revision of the battery sizing calculations did not change the design base requirement to supply the designed load for a duty cycle of 4-hours, however, battery capacity sizing parameter of end cell voltage was changed to a more conservative value to account for minimum load voltage requirements. Load profiles for the batteries were slightly modified to incorporate more precise, yet conservative, load current values. The batteries were evaluated using a 25% additional capacity margin for aging as required by IEEE-450. In addition the batteries have a design margin of 5 to 10% for load growth and/or less than optimum operating condition of the battery. The load profiles are located in the UFSAR, in Calculations E-4.1(Q) and E-5.1(Q), and in station Surveillance Test Procedures and can, therefore, be removed from the TS per the guidance of NRC Generic Letter 91-08. The (*) footnote to be deleted had a one-time applicability and serves no purpose. The Table changes incorporate format and values that are more consistent with the improved BWR4 STS (i.e., when finding one or more cells of a battery outside the CATEGORY A and B limits, requiring a pilot cell verification within 1 hour and permitting 31 days for restoration of battery cell parameters to within the Category A and/or B limits). This change, as explained in the BASES, takes into consideration that, while the battery is degraded, sufficient capacity exists to perform the intended function, and permits sufficient time to fully restore the cell parameters to normal limits.

IV. 10CFR50.92 SIGNIFICANT HAZARDS CONSIDERATION ANALYSIS

PSE&G has, pursuant to 10CFR50.92, reviewed the proposed amendment to determine whether our request involves a significant hazards consideration. We have determined that:

1. The operation of the Hope Creek Generating Station (HCGS) in accordance with the proposed change will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed changes restore conservatism to the battery voltage requirements by raising the minimum acceptable battery terminal voltage for the 125 VDC system in order to support proper operation of the connected loads. This change will cause no change in the probability of any accident and will, by providing increased support for connected loads, provide assurance the consequences of previously evaluated accidents remain within limits.

Removal of the load profile table does not affect the surveillance test loading which is contained in station procedures. The (*) footnote deletion is purely editorial and has no safety bearing. Table changes agree with the format and wording of the improved BWR4 Standard Technical Specifications.

2. The operation of the Hope Creek Generating Station (HCGS) in accordance with the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

The revision of the battery sizing calculations did not change the design base requirement to supply the designed load for a duty cycle of 4-hours. The proposed change to the minimum acceptable battery terminal voltage for the 125 VDC system ensures proper voltages at the battery loads. No other changes to the physical plant or to the manner in which it is operated are caused by the proposed amendment; therefore, there is no new or different kind of accident created by this change.

3. The operation of the Hope Creek Generating Station (HCGS) in accordance with the proposed change does not involve a significant reduction in a margin of safety.

The revision of the battery sizing calculations did not change the design base requirement to supply the designed load for a duty cycle of 4-hours; however, battery capacity sizing parameter of end cell voltage was changed to a more conservative value to account for minimum load voltage requirements. Load profiles for these batteries were slightly modified to incorporate more precise yet conservative load current values. These batteries were evaluated using a 25% additional capacity margin for aging as required by IEEE-450. In addition, the batteries have a design margin of 5 to 10% for load growth and/or less than optimum operating condition of the battery; thereby, maintaining safety margins. Additionally, changes are comparable to the format and ACTIONS of the improved BWR4 STS. Permitting 31 days to restore a battery to within CATEGORY A and/or B limits per the improved BWR4 STS does not involve a reduction in any margin of safety since the battery, in Category C, remains operable, as discussed in the BASES.

Conclusion:

Based upon the foregoing evaluation, we have determined that this proposed change does not involve a Significant Hazards Consideration.