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 BUTLER, W. R. Project Directorate I-2

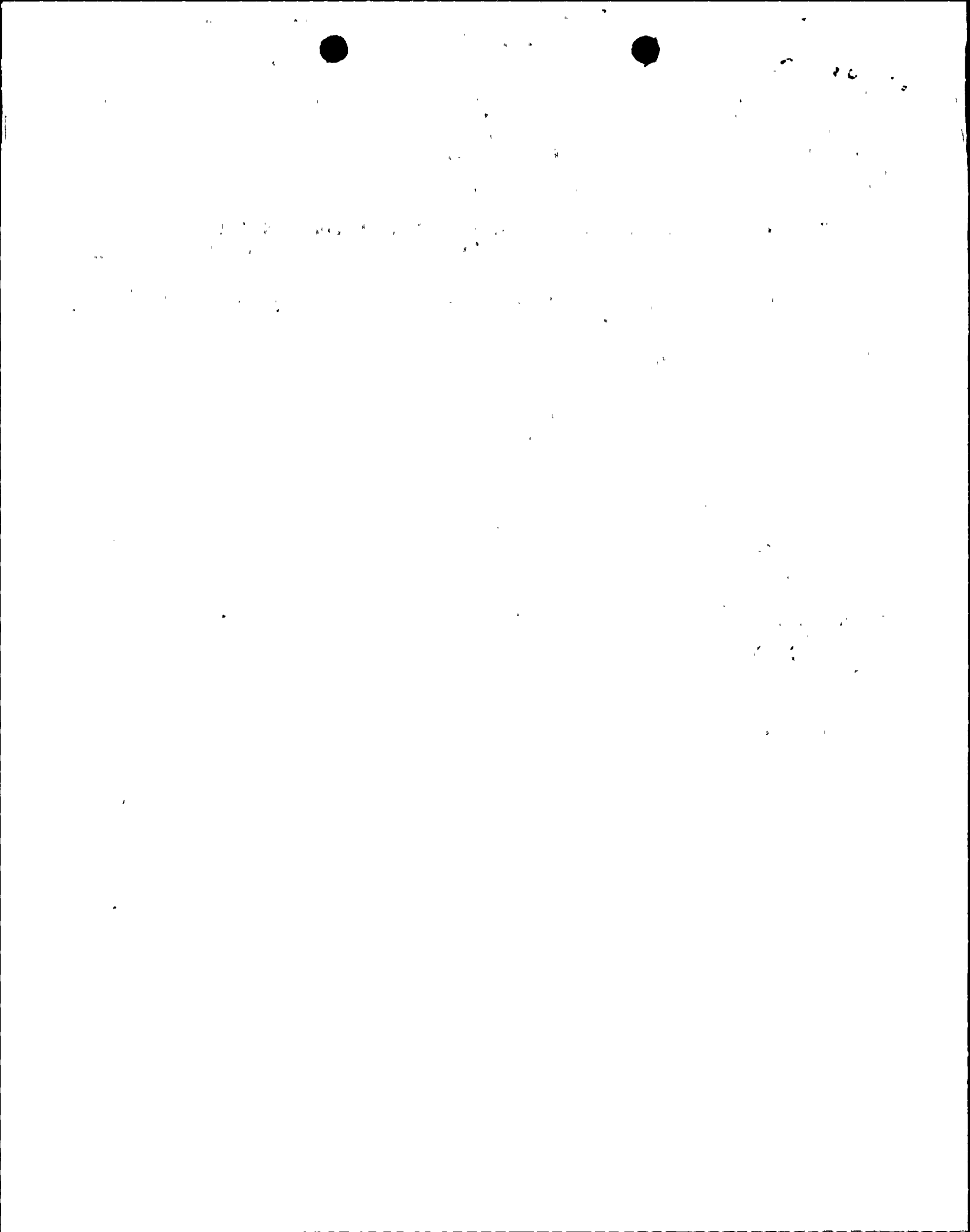
SUBJECT: Forwards application for Amend 105 to License NPF-14,
 revising Tech Spec 4.8.2.1d.2c to reflect new load profile.
 Fee paid.

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Pennsylvania Power & Light Company

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Harold W. Keiser
Vice President-Nuclear Operations
215/770-7502

Director of Nuclear Reactor Regulation
Attention: Dr. W. R. Butler, Project Director
Project Directorate I-2
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT 105 TO LICENSE NPF-14:
250V DC LOAD PROFILE CHANGES
TO UNIT ONE TECHNICAL SPECIFICATIONS
PLA-2939 FILES A17-2, R41-2

Docket No. 50-387

Dear Dr. Butler:

The purpose of this letter is to transmit proposed changes to the Susquehanna SES Unit 1 Technical Specifications due to revisions to the load profiles for 250V DC battery banks 1D650 and 1D660.

BACKGROUND

Technical Specification 3/4.8.2.1, D.C. Sources Operating, lists estimated 250V DC load profiles in Surveillance 4.8.2.1d.2c. Based on a review of the current load configuration, revised calculations indicate the need for a new load profile for both 250V DC battery banks.

Upon approval of the proposed profile, a valid surveillance will be required to be performed. This could be accomplished via a mid-cycle shutdown or by delaying the effective date of the approved change until the next scheduled outage. In order to avoid either of these, the batteries were tested to the new load profile during the Unit 1 Third Refueling and Inspection Outage. This meets current Technical Specification requirements because the new profile envelopes the existing one.

DESCRIPTION OF CHANGE

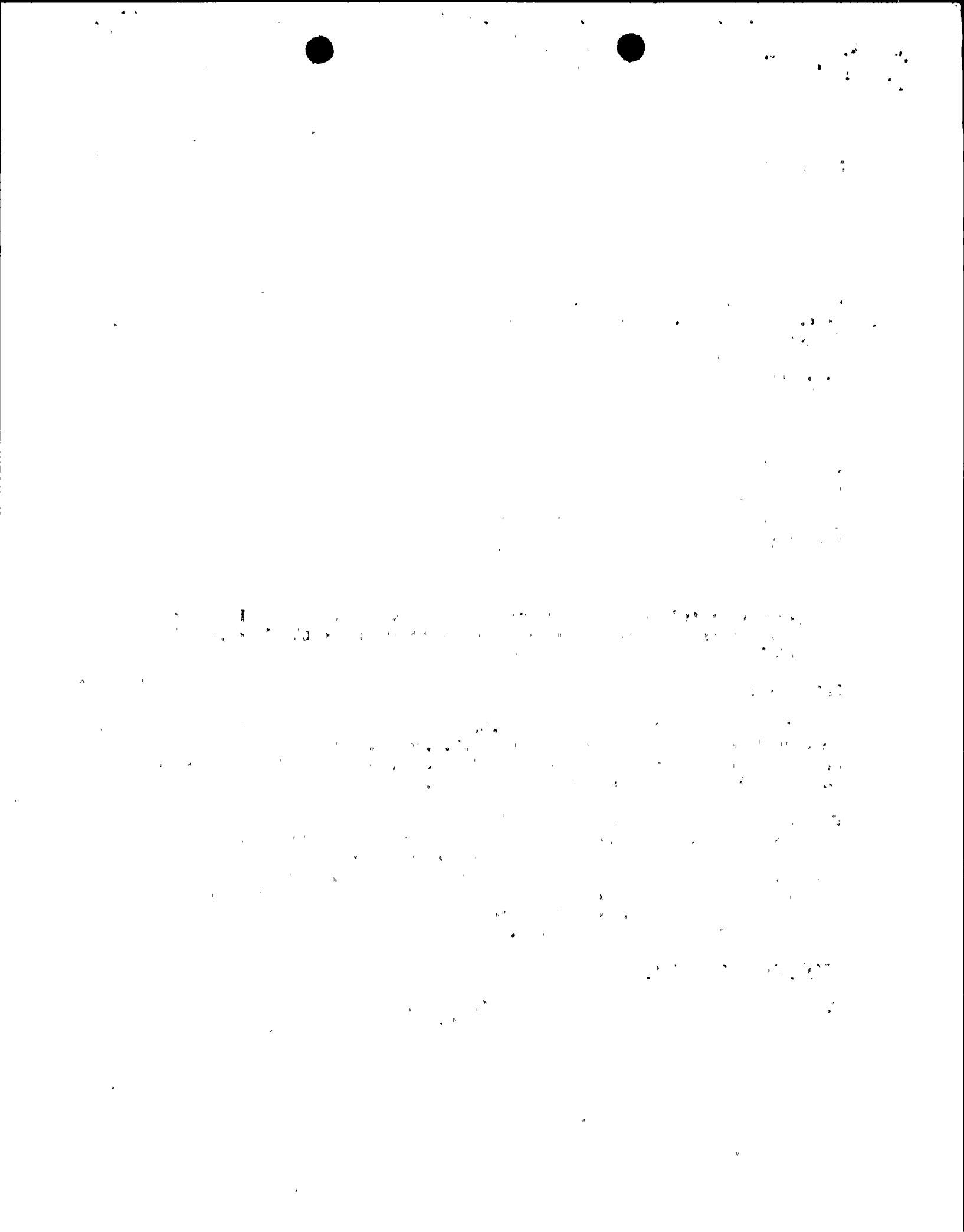
PP&L is proposing that Specification 4.8.2.1d.2c be revised to reflect the new load profile as indicated on the attached marked-up page.

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P PDR

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SAFETY ANALYSIS

The purpose of the 250V DC system is to provide a reliable, continuous source of power to pumps, isolation valves, and essential instrumentation during normal operation. In the event normal AC power is lost, the 250V DC system will provide power until the AC buses are restored to service.

The staff concluded in the Susquehanna Safety Evaluation Report (NUREG-0776) that the 250V DC system met all necessary regulatory criteria. With respect to the proposed change, the pertinent criterion is GDC 17, "Electric Power Systems," which states in part:

"The safety function . . . shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity is maintained in the event of postulated accidents."

Per IEEE-485, actual battery capacity is determined by accounting for the effects of aging and environment over the battery lifetime. This margin allows replacement of the battery when its capacity has decreased to 80% of nameplate, which is well before connected loads could be jeopardized. Since (1) the batteries have been successfully tested to the new profile, and (2) the new profile does not impact the required capacity margin, the proposed Technical Specification change does not affect the staff's original finding that the requirements of GDC-17 are met by the design of the 250V DC system at Susquehanna SES.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

The proposed change does not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated. FSAR Section 8.3.2.1.1.4 states the station batteries have sufficient capacity without the charger, to independently supply the required loads for four hours. The Technical Specifications require the batteries be surveilled to dummy loads which are greater than the design loads. A calculation has been performed by our engineering department which verifies the batteries have adequate capacity to power the actual loads on the 250V DC system with all required margin accounted for.
- (2) Create the possibility of a new or different kind of accident from any previously evaluated. As stated in Part (1), the batteries have sufficient capacity to power the actual battery loads thus enabling them to perform their intended function. Any postulated accident resulting from this change is bounded by previous analysis.

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
5800 S. UNIVERSITY AVENUE
CHICAGO, ILLINOIS 60637

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TO THE DIRECTOR
FROM THE DEPARTMENT OF CHEMISTRY
RE: [Illegible]

[Illegible text]

FOR THE DIRECTOR

[Illegible text]

[Illegible text]

- (3) Involve a significant reduction in the margin of safety. In accordance with IEEE-485, the rated battery capacity included the margin which allows replacement of the battery when its capacity has decreased to 80% of its rated capacity (100% design load). This margin is maintained and was factored into the calculation referred to in Part (1). There is a decrease in the margin between the Technical Specification load profile and the actual battery capacity due to this proposal. However, this change is insignificant because it has not reached the point where it impacts the margin between actual battery capacity and rated capacity.

If you have any questions regarding the above proposal, please direct them to Mr. R. Sgarro at (215) 770-7916. Pursuant to 10CFR170, the appropriate fee is enclosed.

Very truly yours,



H. W. Keiser
Vice President-Nuclear Operations

Attachments

cc: NRC-Document Control Desk (original)
NRC Region I
Mr. J. Stair, NRC Resident Inspector-SSES
Mr. M. C. Thadani, NRC Project Manager-Bethesda
Mr. T. M. Gerusky, Pennsylvania DER