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**AUG 18 2006**

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Stop OP1-17  
Washington, DC 20555

**SUSQUEHANNA STEAM ELECTRIC STATION  
SUPPLEMENT TO PROPOSED AMENDMENT NO. 269  
TO UNIT 1 LICENSE NPF-14 AND AMENDMENT NO. 236  
TO UNIT 2 LICENSE NPF-22: DC ELECTRICAL POWER  
SYSTEMS TECHNICAL SPECIFICATIONS REWRITE  
PLA-6105**

**Docket Nos. 50-387  
and 50-388**

- References:*
- 1) *PLA-6080, B. T. McKinney (PPL) to Document Control Desk (USNRC), "Proposed Amendment No. 269 to Unit 1 License NPF-14 and Amendment No. 236 to Unit 2 License NPF-22: DC Electrical Power Systems Technical Specifications Rewrite, Second RAI Response," dated June 30, 2006.*
  - 2) *Letter from USNRC (R. V. Guzman) to B. T. McKinney (PPL), "Request for Additional Information (RAI) – SSES Units 1 & 2 – Request for Additional Information Regarding Amendment Application to Revise Technical Specifications on DC Electrical System Requirements (TAC Nos. MC5153 and MC5154)," dated May 31, 2006.*
  - 3) *PLA-5995, B. T. McKinney (PPL) to Document Control Desk (USNRC), "Proposed Amendment No. 269 to Unit 1 License NPF-14 and Amendment No. 236 to Unit 2 License NPF-22: DC Electrical Power Systems Technical Specifications Rewrite, Response to Request for Additional Information (RAI)," dated December 15, 2005.*
  - 4) *Letter from C&D Technologies, Inc (J. J. Hohenstein) to L. R. Casella (PPL), "Float Current Used as an Indicator of Battery Charge State," dated August 9, 2006.*

On June 30, 2006, PPL Susquehanna (Susquehanna) provided a response (Reference 1) to questions in the NRC Request for Additional Information (Reference 2). On July 12, 2006, these responses and other NRC Staff concerns with TSTF-360 (DC Electrical Power Systems Technical Specifications) were discussed at a public meeting. As a result, certain site-specific information is required for the NRC staff to complete its review of our proposed license amendment request (Reference 3). This letter provides Susquehanna specific responses to those NRC Staff Concerns #2 and #5a which were determined to be applicable to Susquehanna.

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NRC Staff Concern #2 identified the need for additional justification to replace battery specific gravity monitoring with float current monitoring in the technical specifications (TS). Concurrence from the battery manufacturer to use float current for this purpose was agreed by the NRC Staff to be acceptable as a basis to determine the battery state of charge. Reference 4 (attached) provides this concurrence from C&D Technologies, the Susquehanna battery manufacturer. The Susquehanna 125 and 250 VDC station batteries can be considered fully charged with a float current value of less than or equal to 2 amps over the expected life of the batteries. The equipment used to monitor float current will have the necessary accuracy and capability to measure currents in the expected range.

NRC Staff Concern #5a identified that licensees seeking to create a new battery monitoring and maintenance program need to provide assurance that the relocated battery parameter values will continue to be controlled at their current level, and actions will be implemented in accordance with the licensee's corrective action program.

Upon approval of our proposed license amendment, Susquehanna makes a regulatory commitment to relocate the current battery parameters (i.e., specific gravity, electrolyte level, cell temperature, float voltage, connection resistance, and physical condition) to a new Battery Monitoring and Maintenance Program (See Attachment 3). This program will be located in Susquehanna Unit 1 and Unit 2 Technical Requirements Manuals (TRM) and controlled by 10 CFR 50.59 and the corrective action process. Reference 1 previously submitted a "DRAFT" of the new TRM Section 3.8.7 that will implement these requirements.

Attachment 2 contains revisions to the Unit 1 and 2 TS Section 5.5.13 previously submitted in Reference 1. The proposed revisions consist of changing TS 5.5.13.b from "...below the minimum established design limit" to "...below the top of the plates" and adding TS 5.5.13.c. These changes were identified during a telecon between Susquehanna and NRC Staff members on August 15, 2006. Consistency to the battery manufacturer's recommendations is provided by these changes. There are no changes required to the No Significant Hazards Considerations included with Reference 3 as a result of these revisions to proposed TS 5.5.13.

Susquehanna plans to implement the proposed changes as soon as practical following NRC approval. Therefore, we request NRC complete its review by September 29, 2006 with changes to be implemented within 60 days of NRC approval.

Any questions regarding this request should be directed to Mr. Duane L. Filchner at (610) 774-7819.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: 8-18-06

  
for B. T. McKinney

**Attachments:**

**Attachment 1 - Letter from C&D Technologies, Inc (J. J. Hohenstein) to  
L. R. Casella (PPL), "Float Current Used as an Indicator of  
Battery Charge State," dated August 9, 2006.**

**Attachment 2 - Revised Markup to Proposed Units 1 & 2 Technical Specification  
Section 5.5.13**

**Attachment 3 - List of Regulatory Commitments**

**cc: NRC Region I  
Mr. A. J. Blamey, NRC Sr. Resident Inspector  
Mr. R. V. Guzman, NRC Project Manager  
Mr. R. Janati, DEP/BRP**

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**ATTACHMENT 1 TO PLA-6105**

**PPL SUSQUEHANNA  
C&D TECHNOLOGIES, INC. LETTER  
FOLLOW-UP TO NRC STAFF CONCERN #2**

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# **C&D TECHNOLOGIES, INC.**

**P o w e r   S o l u t i o n s**

1400 Union Meeting Road  
P.O. Box 3053  
Blue Bell, PA 19422-0858  
Telephone (215) 619-2700  
Fax (215) 619-7840

August 9, 2006

Mr. Leonard R. Casella  
PPL Susquehanna, LLC  
769 Salem Boulevard  
Berwick, PA 18603

**Subject: Float Current Used as an Indicator of Battery Charge State**

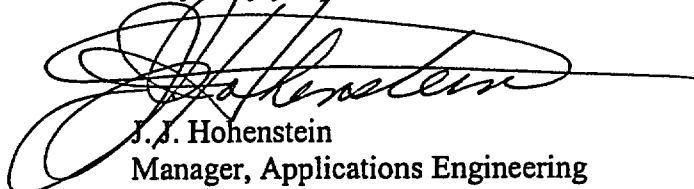
**Reference: Susquehanna Steam Electric Station**

Dear Mr. Casella:

As requested, I wish to state C&D's concurrence that a float current value of less than 2-Amps is a both a reliable and an accurate parameter to use to ascertain a state of full charge for the 125-V dc Station Batteries and the 250-V dc Station Batteries installed at the referenced power plant. That is to say, a float current value of  $\leq 2.0$  Amps on these batteries is a reasonable indicator of a full state of charge. The accuracy and reliability of this reading will hold true over the expected life of these batteries (i.e. 20-years).

I trust this information addresses your concerns. Please contact me if you have any questions at telephone 215-619-2700 extension 365 or via e-mail at [jhohenstein@cdtechno.com](mailto:jhohenstein@cdtechno.com).

Very truly yours,



J. J. Hohenstein  
Manager, Applications Engineering

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**ATTACHMENT 2 TO PLA-6105**

**PPL SUSQUEHANNA  
REVISED UNITS 1 & 2  
TECHNICAL SPECIFICATION  
SECTION 5.5.13**

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5.5 Programs and Manuals (continued)

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5.5.13 Battery Monitoring and Maintenance Program

This program provides for battery restoration and maintenance, which includes the following:

- a. Actions to restore battery cells with float voltage < 2.13 V; and
- b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates; and
- c. Actions to verify that the remaining cells are  $\geq 2.07$  V when a cell or cells have been found to be < 2.13 V.

5.5 Programs and Manuals (continued)

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5.5.13 Battery Monitoring and Maintenance Program

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- a. Actions to restore battery cells with float voltage < 2.13 V; and
- b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates; and
- c. Actions to verify that the remaining cells are  $\geq 2.07$  V when a cell or cells have been found to be < 2.13 V.



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**ATTACHMENT 3 TO PLA-6105**

**PPL SUSQUEHANNA  
LIST OF REGULATORY COMMITMENTS**

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**List of Regulatory Commitments**

The following table identifies those actions committed to by PPL Susquehanna in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Duane L. Filchner.

<b>REGULATORY COMMITMENT</b>	<b>DUE DATE</b>
<p>Relocate the current battery parameters (i.e., specific gravity, electrolyte level, cell temperature, float voltage, connection resistance, and physical condition) to a new Battery Monitoring and Maintenance Program.</p> <p>This program will be located in the Susquehanna Unit 1 and Unit 2 Technical Requirements Manuals (TRM), and controlled by 10 CFR 50.59 and the corrective action process.</p>	<p>Within 60 days following approval of proposed Unit 1 Amendment 269 and proposed Unit 2 Amendment 236.</p>