Westinghouse Electric Company
Nuclear Power Plants
P.O. Box 355
Pittsburgh, Pennsylvania 15230-0355
USA

U.S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, D.C. 20555

Direct tel: 412-374-6206
Direct fax: 724-940-8505
e-mail: sisk1rb@westinghouse.com

Your ref: Docket No. 52-006
Our ref: DCP_NRC_002868

May 10, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 8)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 8. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in this response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Enclosure 1 provides the response for the following RAI(s):

OI-SRP8.3.2-EEB-03

Questions or requests for additional information related to the content and preparation of this response should be directed to Westinghouse. Please send copies of such questions or requests to the prospective applicants for combined licenses referencing the AP1000 Design Certification. A representative for each applicant is included on the cc: list of this letter.

Very truly yours,

Robert Sisk, Manager
Licensing and Customer Interface
Regulatory Affairs and Strategy

/Enclosure

1. Response to Request for Additional Information on SRP Section 8

D063
NRO

cc:	D. Jaffe	-	U.S. NRC	1E
	E. McKenna	-	U.S. NRC	1E
	C. Proctor	-	U.S. NRC	1E
	T. Spink	-	TVA	1E
	P. Hastings	-	Duke Power	1E
	R. Kitchen	-	Progress Energy	1E
	A. Monroe	-	SCANA	1E
	P. Jacobs	-	Florida Power & Light	1E
	C. Pierce	-	Southern Company	1E
	E. Schmiech	-	Westinghouse	1E
	G. Zinke	-	NuStart/Entergy	1E
	R. Grumbir	-	NuStart	1E
	B. Seelman	-	Westinghouse	1E

ENCLOSURE 1

Response to Request for Additional Information on SRP Section 8

AP1000 TECHNICAL REPORT REVIEW

Response to Open Item (OI)

RAI Response Number: ***OI-SRP8.3.2-EEB-03*** (RAI-SRP8.3.2-EEB-03)
Revision: 0

Question:

8.3.2.1.1.1 Evaluation
In RAI-SRP8.3.2-EEB-03, the NRC staff requested that the applicant provide the load profiles (duty cycle) from one minute to 24/72 hours for each of the 24-hour and the 72-hour Class 1 E 250 Vdc batteries. The applicant was asked to discuss battery margins (aging margin, design margin, temperature correction factor, margin associated with float current for 100 percent state of charge) and the expected service life of these batteries.

In the response to the RAI dated June 23, 2009 (ADAMS Accession Number ML091760677), the applicant stated that for battery aging margin a factor of 25 percent would be used for a 20 year qualified battery. Temperature correction will be based on minimum temperature of 60 degrees Fahrenheit. With regard to float current margin, the applicant stated that this margin is described as a consideration for quick turnaround to service after discharge. Since the electrical design described in AP1000 DCD utilizes a spare battery that can replace any safety related battery, there is no immediate need to replace the discharged battery. The replacement interval/service life of the batteries will be in accordance with the testing program replacement with the required test program. However, the applicant did not provide the load profiles for 24-hour and 72-hour batteries as requested by the staff. This is Open Item O/-SRP8.3.2-EEB-03.

Westinghouse Response:
The nominal loads on the batteries are identified in DCD Tables 8.3.2-1, 2, 3, and 4. WEC design is based on intelligent assumptions on the loads. Detailed IDS (Class 1E dc and Uninterruptible Power Supply System) calculations are used as design input.

Under cover of a memo dated May 7, 2010, Westinghouse provided the below documents to the Westinghouse Rockville Office. These documents contain the information needed by the NRC to assess adequacy of the 24-hour and 72-hour batteries.

Documents Provided:

- "Class 1E DC and UPS (IDS) Inverter and Regulating Transformer Sizing"
- "IDS Power Cable Sizing and Voltage Drop Analysis"

This deliverable completes the Westinghouse action related to this open item.

Reference(s):
None

AP1000 TECHNICAL REPORT REVIEW

Response to Open Item (OI)

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None