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: 43-374-6206
Direct fax: 724-940-8505
e-mail: sisk1rb@westinghouse.com

Your ref: Docket No. 52-006
Our ref: DCP_NRC_002760

February 1, 2010

Subject: AP1000 Response to Proposed Open Item (Chapter 7)

Westinghouse is submitting the following responses to the NRC open item (OI) on Chapter 7. These proposed open item response are submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in these responses 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 proposed Open Item(s):

OI-SRP7.2-ICE-05

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 Standardization

/Enclosure

1. Response to Proposed Open Item (Chapter 7)

D063
NRO

cc:	D. Jaffe	-	U.S. NRC	1E
	E. McKenna	-	U.S. NRC	1E
	S. Mitra	-	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

AP1000 Response to Proposed Open Item (Chapter 7)

AP1000 TECHNICAL REPORT REVIEW

Response to Open Item (OI)

RAI Response Number: OI-SRP7.2-ICE-05
Revision: 0

Question:
The CIM serves as a transitional device that receives its safety-related input signal from the output of its respective SRNC and delivers its output signal to the respective final actuation device of a given safety-related component. The CIM also serves as an interface device that receives input signals from the nonsafety-related PLS, in addition to the input signal it receives from the SRNC. The nonsafety-related communications (control) signal is applied to the CIM through the nonsafety-related RNC, which serves as a transitional device from the non-safety related to the safety-related systems.

The staff conducted an engineering review with WEC technical personnel on October 15, and 16, 2008, and January 29 and 30, 2009, to discuss the PMS, of which the CIM is a critical part. The staff found WEC could not provide sufficient planning or design information on the CIM related to the priority module. The following provides a topical breakdown of the required information:

- Section 5.1.5 of WCA-16675-P describes the CIM as a nonsoftware-based Class 1E device that is not considered to be susceptible to a software common-cause failure. However, WEC has not provided sufficient information for the staff to determine that the CIM is not susceptible to a software common-cause failure.
- WEC has not described the equipment qualification for the CIM.
- WEC has not described the software development plan for the CIM.

WEC has not provided sufficient information on these topics, previously requested under RAI-SRP7.1-ICE-21, RAI-SRP7.1-ICE-22, and RAI-SRP7.1-ICE-23. **The NRC staff identified this as OI-SRP-7.2-05.**

Westinghouse Response:
In addition to the discussions held with the NRC noted in the above question, the CIM was also discussed in an August 2009 conference call. During that call WEC stated that the design, qualification, data communication isolation, and development process will be addressed in the CIM Technical Report, WCAP-17179-P (APP-GW-GLR-143) Revision 0 "AP1000 Component Interface Module Technical Report". This document was submitted to the NRC via DCP_NRC_002725 dated December 30, 2009. This report describes the Component Interface Module (CIM) system components. The CIM system components are logic based modules that do not utilize a microprocessor or software for operation, but instead rely on simple hardware architecture. The logic is implemented using field programmable gate array (FPGA) technology. The CIM system components have been developed as nuclear safety-related (Class 1E) products by CS Innovations, a 10 CFR Part 50, Appendix B supplier and wholly owned subsidiary of Westinghouse Electric Company.

AP1000 TECHNICAL REPORT REVIEW

Response to Open Item (OI)

With the issuance of WCAP-17179-P, the CIM related information contained in WCAP-16767, "Response to Request for Additional Information on Westinghouse Combined License (COL) Pre-Application Technical Reports Number 42 and Number 88" (APP-PMS-GL-042) as documented in RAI-SRP7.1-ICE-21, Rev 1) is withdrawn.

References:

1. WCAP-17179-P (APP-GW-GLR-143) Revision 0, "AP1000 Component Interface Module Technical Report
2. WCAP-16767, "Response to Request for Additional Information on Westinghouse Combined License (COL) Pre-Application Technical Reports Number 42 and Number 88" (APP-PMS-GL-042)

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None