



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: 412-374-5005
e-mail: sisk1rb@westinghouse.com

Your ref: Docket No. 52-006
Our ref: DCP/NRC2398

March 5, 2009

Subject: AP1000 Response to Request for Additional Information (SRP 3)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 3. 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:

RAI SRP3.9.1-EMB1-03 R2

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,

A handwritten signature in black ink, appearing to read 'Robert Sisk'.

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

/Enclosure

1. Response to Request for Additional Information on SRP Section 3

D063
NRC

cc:	D. Jaffe	- U.S. NRC	1E
	E. McKenna	- U.S. NRC	1E
	B. Gleaves	- 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
	D. Lindgren	- Westinghouse	1E

ENCLOSURE 1

Response to Request for Additional Information on SRP Section 3

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI SRP3.9.1-EMB1-03
Revision: 2

Question:

During the on-site technical review held the week of October 20, 2008, of ASME Class 1 piping for the AP1000 DCA, the NRC staff found the applicant used a computer program called WESTEMS for fatigue analysis of seismic Category I components and supports. This program is not discussed in subsection 3.9.1.2 of the DCD, nor is it contained in Table 3.9-15. The Staff requests that the applicant address this DCD conformance issue.

Additional question:

As a result of the on-site technical review on October 20, 2008, the NRC staff found that the fatigue analyses for the design of AP1000 seismic Category I components and supports were performed using a computer program called WESTEMS, which was not discussed in the AP1000 DCD subsection 3.9.1.2, "Computer Code Used in Analyses," nor listed in Table 3.9-15, "Computer Programs for Seismic Category I Components."

In its response to the staff's RAI-SRP3.9.1-EMB1-03, Westinghouse indicated that the DCD will be revised to add WESTEMS computer program to Table 3.9-15. Since the program has been used for design of AP1000 Seismic Cat I components, confirm whether the computer code WESTEMS was previously reviewed and approved by the NRC staff. If yes, provide dates and versions of the program that was reviewed and approved by the staff and the prior plant license applications using WESTEMS. If not, Westinghouse is requested to provide evidence of the computer code verification and validation documentation for design of the ASME Class 1, 2 and 3 components and piping in accordance with Appendix B to 10 CFR 50.55a, or ASME code NQA-1 Code. Confirm that the documentation of the computer code WESTEMS is available for staff review. The information should include the author, source code, dated version, and facility; the program users manual and theoretical description, the extent and limitation of the program application; and the benchmarking problems, the QA control and maintenance of the program.

Westinghouse Response:

WESTEMS is used for fatigue analysis of seismic Category I components. It is not used for fatigue analysis of supports.

Westinghouse will revise Table 3.9-15 in the DCD to include this fatigue analysis program. The text in Section 3.9.1.2 does not need to be revised to include this program, because it addresses the verification and benchmarking of analysis programs used in standard static and dynamic piping analysis.

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

Additional response:

The WESTEMS computer program was not previously reviewed and approved by the NRC staff. During the on-site technical review on October 20, 2008, a member of the NRC staff was provided with the user manual and the verification package for the WESTEMS program. This is a configuration control program that follows the internal Westinghouse Quality Policies/Procedures Manual which, in turn, satisfies 10CFR50 Appendix B, and NRC QA requirements. This WESTEMS documentation package will be made available for additional NRC review in either the Rockville or Monroeville Westinghouse offices.

Design Control Document (DCD) Revision:

Add an entry to Table 3.9-15 as follows:

Table 3.9-15	
COMPUTER PROGRAMS FOR SEISMIC CATEGORY 1 COMPONENTS	
Program	Application
FLOW 3D	Finite element fluid flow and heat transfer
WESTEMS	Fatigue analysis of components

PRA Revision:

None

Technical Report (TR) Revision:

None