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Your ref: Project Number 740  
Our ref: DCP/NRC1776

September 15, 2006

Subject: AP1000 COL Response to Requests for Additional Information (TR 6)

In support of Combined License application pre-application activities, Westinghouse is submitting a response to the NRC request for additional information (RAI) on AP1000 Standard Combined License Technical Report 6, APP-GW-GLR-021, AP1000 As-Built COL Information Items. This RAI response is submitted as part of the NuStart Bellefonte COL Project (NRC Project Number 740). The information included in the response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification.

A response is provided for TR6-1, transmitted in an NRC letter from Steven D. Bloom to Andrea Sterdis, dated August 8, 2006, Subject: Westinghouse AP1000 Combined License (COL) Pre-application Technical Report 6 – Request for Additional Information (TAC No. MD2174).

Pursuant to 10 CFR 50.30(b), the response to the request for additional information on Technical Report 6, numbered RAI-TR06-001 is submitted as Enclosure 1 under the attached Oath of Affirmation.

It is expected that when the review of the RAI on Technical Report 6 is complete, the technical report will be revised as indicated in the response and submitted to the NRC. The RAI response will be included in the document.

Questions or requests for additional information related to the content and preparation of these responses 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 that reads 'D. F. Hutchings' followed by a stylized flourish.

A. Sterdis, Manager  
Licensing and Customer Interface  
Regulatory Affairs and Standardization

/Attachment

1. "Oath of Affirmation," dated September 15, 2006

/Enclosure

1. Response to Request for Additional Information on Technical Report No. 6  
RAI-TR06-001

cc:	S. Bloom	- U.S. NRC	1E	1A
	S. Coffin	- U.S. NRC	1E	1A
	G. Curtis	- TVA	1E	1A
	P. Grendys	- Westinghouse	1E	1A
	P. Hastings	- Duke Power	1E	1A
	C. Ionescu	- Progress Energy	1E	1A
	D. Lindgren	- Westinghouse	1E	1A
	A. Monroe	- SCANA	1E	1A
	M. Moran	- Florida Power & Light	1E	1A
	C. Pierce	- Southern Company	1E	1A
	E. Schmiech	- Westinghouse	1E	1A
	G. Zinke	- NuStart/Entergy	1E	1A

**ATTACHMENT 1**

**“Oath of Affirmation”**

ATTACHMENT 1

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of: )  
NuStart Bellefonte COL Project )  
NRC Project Number 740 )

APPLICATION FOR REVIEW OF  
"AP1000 GENERAL COMBINED LICENSE INFORMATION"  
FOR COL APPLICATION PRE-APPLICATION REVIEW

Daniel S. Lipman, being duly sworn, states that he is Senior Vice President, Nuclear Power Plants, for Westinghouse Electric Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission this document; that all statements made and matters set forth therein are true and correct to the best of his knowledge, information and belief.



Daniel S. Lipman  
Senior Vice President  
Nuclear Power Plants

Subscribed and sworn to  
before me this 15<sup>th</sup> day  
of September 2006.

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal  
Debra McCarthy, Notary Public  
Monroeville Boro, Allegheny County  
My Commission Expires Aug. 31, 2009

Member, Pennsylvania Association of Notaries

Notary Public

**ENCLOSURE 1**

**Response to Request for Additional Information on Technical Report No. 6**

**RAI-TR06-001**

# AP1000 TECHNICAL REPORT REVIEW

## Response to Request For Additional Information

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RAI Number: RAI-TR06-001

### **Question:**

Westinghouse proposed to modify the wording of Combined License (COL) Information Item 3.9-2 in AP1000 Design Control Document (DCD) Section 3.9.8.2. COL Information Item 3.9-2 specifies that COL applicants referencing the AP1000 design have available for NRC audit the specification and design reports for ASME Section III components. The basis for Westinghouse's proposed change is that COL information item also refers to as-built information for piping which will not be available at the time of the COL application. Westinghouse's proposed modification adds the following sentence to DCD Section 3.9.8.2.

"The final design reports including the reconciliation of the as-built piping are completed by the COL holder after the construction of the piping systems and prior to fuel load."

The staff is concerned the this added wording could be interpreted to mean that the design stress analysis of ASME Section III piping components do not have to be available at the time of the COL application. This interpretation would not be consistent with the wording of COL Action Item 3.9.2.4-1 discussed in Final Safety Evaluation Report (FSER) Section 3.12.5.9. COL Action Item 3.12.5.9 does not refer to reconciliation of the piping analysis of the piping analysis with as-built information. The staff agrees the as-built piping information will not be available at the time of the COL application. In order to avoid possible confusion, the staff requests that Westinghouse revise DCD section 3.9.8.2 to be consistent with the wording used for COL Action Item 3.9.2.4-1 as-discussed in FSER Section 3.12.5.9

### **Westinghouse Response:**

COL Information Item 3.9-2 explicitly identifies that verification of thermal cycling and stratification loadings is included in the reconciliation of as-built piping. The discussion in 3.12.5.9 (page 3-276) of the FSER (NUREG-1793, Reference 1) implies that as-built information is required by the use of the phrase final stress analysis. Also the revised response to RAI 210.049 (Reference 2) cited in the FSER discussion explicitly identifies that the reconciliation is done using as-built information. The COL Information Item 3.9-2 included in Revision 15 of the DCD uses the exact words provided in the revised response to RAI 210-049 for the revision of the COL information item. The write-up in the FSER accepted that change. For these reasons Westinghouse understands that the portion of the information item relevant to piping analysis is a commitment for the as-built reconciliation.

However, Westinghouse notes that the criteria for evaluation of thermal cycling and stratification loadings are referenced in the Piping Design Acceptance Criteria (DAC) (Table 1-2, Piping Design Acceptance Criteria, Introduction to the AP1000 Design Control Document

# **AP1000 TECHNICAL REPORT REVIEW**

## **Response to Request For Additional Information**

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Reference 3). Westinghouse will include this evaluation as part of the generic portion of the ASME design report. This report will be prepared prior to fabrication using design information and it will be available for NRC review. Although the DAC is not required to be closed prior to COL application, the generic portion of the ASME design reports covering the piping systems of interest are scheduled to be completed to support closing the DAC during the pre-application review phase.

As identified in RAI 210-049 during the design certification review, thermal cycling and stratification loadings will be addressed in the design reports for the following piping systems.

- Cold leg piping in the loop with passive RHR (during long-term PRHR operation)
- Pressurizer surge line
- Automatic depressurization system stage 4 lines
- Normal residual heat removal suction line
- Passive residual heat removal return line

Since the evaluation of thermal cycling and stratification loadings is included in the piping DAC, an additional COL information item requiring evaluation of thermal cycling and stratification loadings using the as-designed piping system configuration would be redundant and is not required.

For the reasons noted above, Westinghouse does not intend to revise COL information items to be consistent with FSER action items.

### **Reference:**

1. NUREG-1793, AP1000 Final Safety Evaluation Report, September 2004
2. AP1000 Design Certification RAI Number:210.049 (Response Revision 1)
3. APP- GW-GLR-700, AP100 Design Control Document, Revision 15

### **Design Control Document (DCD) Revision:**

None additional to TR6 previously provided (APP-GW-GLR-021 Rev. 0., Reference 3)

### **PRA Revision:**

None