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U.S. Nuclear Regulatory Commission
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Your ref: Project Number 740
Our ref: DCP/NRC1947

June 21, 2007

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

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

Responses are provided for TR6-CVIB-07 and TR6-CVIB-08, transmitted in an email from David Jaffe to Don Lindgren, dated May 8, 2007.

Pursuant to 10 CFR 50.30(b), the responses to the requests for additional information on Technical Report 6, numbered RAI-TR06-CVIB-07 and RAI-TR06-CVIB-08 are submitted as Enclosure 1 under the attached Oath of Affirmation.

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,

D. A. Lindgren /FOR

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

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D063

NRO

/Attachment

1. "Oath of Affirmation," dated June 21, 2007

/Enclosure

1. Responses to Requests for Additional Information on Technical Report No. 6

cc:	D. Jaffe	-	U.S. NRC	1E	1A
	E. McKenna	-	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
	D. Ekeroth	-	Westinghouse	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

W. E. Cummins, being duly sworn, states that he is Vice President, Regulatory Affairs & Standardization, 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.

W. E. Cummins
Vice President
Regulatory Affairs & Standardization

Subscribed and sworn to
before me this 21ST day
of June 2007.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Debra McCarthy, Notary Public
Monroeville Boro, Allegheny County
My Commission Expires Aug. 31, 2009
Member, Pennsylvania Association of Notaries

Debra McCarthy
Notary Public

ENCLOSURE 1

Responses to Requests for Additional Information on Technical Report No. 6

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR06-CVIB-07
Revision: 0

Question:

The staff requests that you provide further revisions to DCD Section 5.3.6.1 in response to COL Information Item 5.3-1 by including language addressing the pressure-temperature (P-T) limit curves to be used by COL applicants. The revisions to DCD Section 5.3.6.1 should include a discussion of the following topics:

a. Specify whether the P-T limit curves to be used by COL applicants will be bounding for the AP1000 design. In the context of this question, "bounding" means P-T limit curves based on the most conservative relevant material properties allowed by the AP1000 design specifications and a designed neutron fluence.

b. If specific P-T limit curves have already been developed for use by COL applicants as bounding curves for the AP1000 RV design, please include a reference for the report where these curves are located. This report must be specifically referenced in revised DCD Section 5.3.6.1 even if the report proposes to amend the P-T limit curve figures in the original DCD.

c. If specific P-T curves have not yet been developed for use by COL applicants as bounding curves for the AP1000 design, please include, in your revision to DCD Section 5.3.6.1, a general discussion of how bounding curves will be established by COL applicants. Furthermore, any P-T limit curves that are currently designated in DCD Section 5.3.6.1 as generic and/or bounding for the AP1000 design must also be designated as having not yet been reviewed and approved by the NRC.

d. The current revision to DCD Section 5.3.6.1, as originally proposed in COL Information Item 5.3-1, states that the use of plant-specific P-T limit curves will be addressed by the COL holder during procurement and fabrication of the RV. Please include, in revised DCD Section 5.3.6.1, a discussion of how COL holders will establish, subsequent to issuance of the COL, plant-specific P-T limit curves that may differ from the bounding curves established by COL applicants.

Westinghouse Response:

a. The P-T curves in Section 5.3.6.1 are bounding as they are based on the most conservative relevant material properties allowed by the AP1000 design specifications and maximum neutron fluence. The curves in the Design Control Document (DCD) have sufficient operating margin and are expected to be used by the COL holders subject to verification of material properties.

b. The PT curves in the DCD are bounding curves based on material properties and alloying and contaminant elements at the limits specified in the DCD. The COL applicants are not expected to create any additional bounding curves. The curves in 5.3.6.1 are part of the Tier 2 information that has been accepted by NRC. The Final Safety Evaluation Report for the AP1000 (NUREG-1793) discusses the review and acceptance of the pressure-temperature limits by the NRC. It is not appropriate to designate information in the DCD as not being reviewed or approved by the NRC.

Please note that the PT Curves have been updated as discussed in Technical Report APP-GW-GLN-009. These revised curves are included in Revision 16 of the DCD.

c. The AP1000 is a standard design with one set of design transients and operating conditions. No site or plant specific curves have been or are expected to be developed. The curves in the DCD are the curves expected to be used by the COL holders.

d. As noted above the COL applicants are expected to use the generic bounding curves provided in the DCD. It is likely that a COL holder that develops plant specific curves to address a material deviation or to provide additional operating margin would use the same methodology to develop the curves as was used to the generic bounding curves. It is not appropriate or necessary for the DCD to address how each COL holder handles departures from the Tier 2 document information.

Reference: None

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-TR06-CVIB-08
Revision: 0

Question:

The staff requests that you provide further revisions to DCD Section 5.3.6.4 in COL Information Item 5.3-4 to include language addressing the RV beltline material properties to be used by COL applicants. The revisions to DCD Section 5.3.6.4 should include a discussion of the following topics:

a. Specify whether the RV beltline material properties that will be used by COL applicants will be bounding for the AP1000 design.

b. If specific RV beltline material properties have already been designated for use by COL applicants as bounding properties for the AP1000 RV design, please include a reference for the DCD Tables and/or report where these beltline material properties are located. Any report that proposes to amend the RV beltline material properties in DCD Tables 5.3-1 and 5.3-3 must be specifically referenced in revised DCD Section 5.3.6.4.

c. If specific RV beltline material properties have not yet been designated for use by COL applicants as bounding for the AP1000 design, please include, in your revision to DCD Section 5.3.6.4, a general statement regarding how bounding RV beltline material properties will be established by COL applicants.

d. The current revision to DCD Section 5.3.6.4, as originally proposed in COL Information Item 5.3-4, states that the verification of plant-specific RV beltline material properties will be completed by the COL holder prior to fuel load. Please include, in revised DCD Section 5.3.6.4, a discussion of how COL holders will establish, subsequent to issuance of the COL, plant-specific RV beltline material properties that may differ from the bounding RV beltline material properties submitted by COL applicants.

Westinghouse Response:

a. The beltline materials included in the text and tables referenced in 5.3.6.4 are "maximum" or bounding. Table 5.3-1 is labeled as maximum limits. The temperatures in Table 5.3-3 are based on materials at the maximum limits. These material properties are stated in the ASME design specification for reactor vessel on file at Westinghouse. The discussion in 5.3.3.2 of the Final Safety Evaluation Report for the AP1000 identifies that Table 5.3-1 provides maximum content limits.

b. The material specifications for the reactor vessel are identified in DCD Table 5.2-1. The fracture toughness requirements are identified in Subsection 5.3.2.5. The limits for selected

elements are identified in Table 5.3-1. The material property requirements are included in the ASME Design specification for reactor vessel on file at Westinghouse.

c. Reactor vessel beltline material properties have been established and are documented in the Design Control Document. Bounding values for fracture toughness and pressure temperature limit curves have been established.

d. The AP1000 DCD describes a standard design. The results of the activity required by COL information item are expected to be a verification that the material in the as-fabricated reactor vessel satisfies the material requirements defined in the DCD. The DCD is not required to address how a COL holder would handle departures from DCD Tier 2 information.

Reference: None

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None