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Your ref: Docket No. 52-006
Our ref: DCP_NRC_002807

March 5, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 6)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 6. 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):

RAI-SRP6.1.1-CIB1-01

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 6

DOG 3
NRD

cc:	D. Jaffe	- U.S. NRC	1E
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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 6

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP6.1.1-CIB1-01
Revision: 0

Question:

Appendix 1A of Revision 17 of the AP1000 DCD introduced exceptions to Regulatory Guide 1.44 ("Control of the Use of Sensitized Stainless Steel"). Please provide the following information about those proposed exceptions:

- (a) Identify and justify the first part of the exception being proposed to Regulatory Position C.3. As written in Rev. 17, the first part of the exception exempts certain product forms from corrosion testing if they are water quenched. This exemption is already permitted by footnote #4 in RG 1.44 and therefore does not appear to be an exception to C.3.
- (b) Identify and justify the exception being proposed to Regulatory Position C.4. As written in Rev. 17, this exception is a statement of fact about the temperature of the weld heat-affected zone and does not identify an exception to C.4. Since C.4 does not prevent temperatures in the range 800 to 1500°F, the statement proposed in the DCD is not an exception.
- (c) Justify the proposal to use historical test data as a substitute for the corrosion test requirements in Regulatory Position C.6. Position C.6 is related to intergranular corrosion testing for actual materials and welding procedures. It is the staff's understanding that the actual materials and welding procedures for AP1000 plants are not yet available, in which case it would not be possible to have test data satisfying this regulatory position.

Westinghouse Response:

Westinghouse has reviewed the points identified in the request and determined that the design is actually in conformance with the subject regulatory guidance. As such, the DCD Appendix 1A conformance statement will be revised to show "Conforms" and no justifications for exceptions are necessary.

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

Design Control Document (DCD) Revision:

Criteria Section	Referenced Criteria	AP1000 Position	Clarification/Summary Description of Exceptions
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Reg. Guide 1.44, Rev. 0, 5/73 – Control of the Use of Sensitized Stainless Steel

C.1-2		Conforms	
C.3		Conforms	Product forms with simple shapes are not corrosion tested provided they are water quenched following solution anneal. Cast metal and weld metal containing more than five percent delta ferrite also are not corrosion tested as they are not susceptible to sensitization.
C.4		Conforms	Welding operations necessarily result in the weld heat affected zone (HAZ) being between the temperature of 800°F to 1500°F even for non-L Grade austenitic stainless steel. However, the discussion portion of this Regulatory Guide states “Stainless steel subjected to sensitizing temperatures (800 to 1500°F) during fabrication (except during welding) should be retested with a suitable intergranular corrosion test...”, indicating that weld HAZ material is exempt from C.4.
C.5		Conforms	
C.6		Conforms	Extensive testing has been completed and documentation is available such that an intergranular corrosion test is not required for AP1000 welding procedures. ASTM A262 practice A or E are practice E testing is performed as part of the weld procedure qualification PQR for non-low carbon austenitic stainless steel base metals.

PRA Revision:

None

Technical Report (TR) Revision:

None