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Your ref: Docket No. 52-006
Our ref: DCP/NRC2471

May 12, 2009

Subject: AP1000 Response to Proposed Open Item (Chapter 19)

Westinghouse is submitting a response to an NRC unresolved issue on Chapter 19. This proposed open item 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 proposed open item:

OI-SRP19.0-SPLA-14

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 'R. Sisk' followed by a large, stylized flourish.

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

/Enclosure

1. Response to Request for Additional Information on SRP Section 19

cc:	D. Jaffe	- U.S. NRC	1E
	E. McKenna	- U.S. NRC	1E
	S. Sanders	- U.S. NRC	1E
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	P. Hastings	- Duke Power	1E
	R. Kitchen	- Progress Energy	1E
	A. Monroe	- SCANA	1E
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ENCLOSURE 1

Response to Request for Additional Information on Chapter 19

AP1000 DCD SER Open Item REVIEW

Open Item Resolution

OI Response Number: OI-SRP19.0-SPLA-14
Revision: 0

Question:

The staff is looking for more information related to Westinghouse's response to RAI-SRP19.0-SPLA-14.

Please provide information resolving the discrepancy in the containment inventory of radionuclides used for survivability evaluation, determining whether mechanical penetrations and hatches (e.g., gasket materials) need to be included in the survivability assessment and providing a holder item to finalize the list of equipment that must survive.

Westinghouse Response:

The core inventory released in TR-68 is higher than in DCD Rev. 15.

The gamma dose and dose rate inside containment after a LOCA in TR-68 is lower than in DCD Rev.15.

The reason for the lower dose in TR-68 is a result of revised modeling of containment air activity removal. The analysis in DCD Rev. 15 only considered radioactive decay as the activity removal mechanism following release from the core. However, activity removal mechanisms other than decay should be considered. In addition, the removal processes should be consistent with those considered in the off-site dose assessment since Regulatory Guide 1.183 states that similar credits can be taken in the equipment qualification analyses.

A review of the off-site dose calculation of record, CN-CRA-01-67, Revision 4, indicates that off-site dose calculations took credit for natural/passive removal mechanisms (i.e., sedimentation, diffusiophoresis (deposition driven by steam condensation), and thermophoresis (deposition driven by heat transfer). These removal mechanisms were considered in the off-site dose analysis and accepted by NRC. Since Regulatory Guide 1.183 states that similar credits can be taken in the environmental qualification analysis, they were considered in the analysis used in TR-68.

APP-GW-VP-025, Rev. 0, "AP1000 Equipment Survivability Assessment," which is Attachment A to TR-68 (APP-GW-GLR-069, Rev. 0, "Equipment Survivability Assessment") contains Table 6c: "List of Equipment Located Inside Containment (T2 and T3)". This table is a list of equipment subjected to severe accident environment for which an assessment is required. The gasket material used in the containment hatches should be included in Table 6c and will be added to Table 6c in the next revision to APP-GW-VP-025. The next revision to APP-GW-VP-025 will be completed by September 2009.

AP1000 DCD SER Open Item REVIEW

Open Item Resolution

References:

1. CN-CRA-01-67, Revision 4, "AP1000 – LOCA Dose Analysis," J. Grover

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

Add the containment penetration and hatch gasket material to Table 6c of APP-GW-VP-025.