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Your ref: Docket No. 52-006  
Our ref: DCP\_NRC\_002832

March 23, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 11)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 11. 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-SRP11.3-CHPB-06

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", written over a horizontal line.

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

/Enclosure

1. Response to Request for Additional Information on SRP Section 11

D063  
NRO

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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 11

# AP1000 TECHNICAL REPORT REVIEW

## Response to Request For Additional Information (RAI)

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RAI Response Number: RAI-SRP11.3-CHPB-06

Revision: 0

### **Question:**

Staff review of Change Number 23 to DCD Tier 1 (Rev X) section 2.3.11 indicate that the applicant removed all inspections, tests, analyses, and acceptance criteria (ITAACs) concerning the seismic design loads of the equipment in the gaseous radioactive waste management system, specifically the carbon delay beds and the discharge isolation valve. These two component types still have seismic design criteria (ie.  $\frac{1}{2}$  safe shutdown earthquake, SSE, for delay beds) that the applicant must inspect and test according to RG-1.143. Therefore, Tier 1 section 2.3.11 and Table 2.3.11-2 should still contain the seismic design commitment, and inspection, tests, analyses, and acceptance criteria even though they are not seismic Category I equipment. Please incorporate into Tier 1 section 2.3.11 and Table 2.3.11-2 all ITAACs associated with the seismic design of the delay beds and isolation valve or provide detailed justification why these design commitments and ITAACs need not be included in DCD Tier 1 section 2.3.11., modeling assumptions and their basis, parameter values and their basis, and any references.

### **Westinghouse Response:**

The initial removal of the ITAAC was to address a null set of ITAACs, 2a.i, 2a.ii, and 2a.iii in Tier 1 Table 2.3.11-2 that was created due to an editorial change to correct the classification of the carbon delay beds in the gaseous radwaste system (WGS). The seismic classification of the carbon delay beds was non-seismic in DCD Rev. 15 Tier 2 Table 3.2-3 and was never changed. To keep the classification consistent between Tier 1 Table 2.3.11-1 and Tier 2 Table 3.2-3, Tier 1 Table 2.3.11-1 was corrected in DCD Rev. 17. Correction of the classification of the carbon delay beds in Tier 1 Table 2.3.11-1 created a null set of ITAACs in Tier 1 Table 2.3.11-2 because there were no Seismic Category 1 equipment in Table 2.3.11-1 as referenced in the ITAAC.

To correct this discrepancy, the ITAACs in Table 2.3.11-1 were deleted in Westinghouse correspondence letter DCP\_NRC\_002672 dated October 23, 2009 and included in Westinghouse correspondence letter DCP\_NRC\_002744 dated January 20, 2010.

To address the NRC's question we have restored the ITAACs in Tier 1 Table 2.3.11-2 for seismic design requirements as provided in Tier 1 Table 2.3.11-1. Along with restoration of the ITAAC, additional wording has been provided in the Design Description of Tier 1 of Section 2.3.11 along with a change to Tier 1 Table 2.3.11-1 to make it clear what WGS components have seismic design requirements.

# AP1000 TECHNICAL REPORT REVIEW

## Response to Request For Additional Information (RAI)

### Design Control Document (DCD) Revision:

#### 2.3.11 Gaseous Radwaste System

##### Design Description

The gaseous radwaste system (WGS) receives, processes, and discharges the radioactive waste gases received within acceptable off-site release limits during normal modes of plant operation including power generation, shutdown and refueling.

The WGS is as shown in Figure 2.3.11-1 and the component locations of the WGS are as shown in Table 2.3.11-3.

1. The functional arrangement of the WGS is as described in the Design Description of this Section 2.3.11.
  2. The equipment identified in Table 2.3.11-1 can withstand the appropriate seismic design basis loads without loss of its structural integrity function.
- 2.3. The WGS provides the nonsafety-related functions of:
- a) Processing radioactive gases prior to discharge.
  - b) Controlling the releases of radioactive materials in gaseous effluents.
  - c) The WGS is purged with nitrogen on indication of high oxygen levels in the system.

Table 2.3.11-1		
Equipment Name	Tag No.	Seismic Category I
WGS Activated Carbon Delay Bed A	WGS-MV-02A	No <sup>(1)</sup>
WGS Activated Carbon Delay Bed B	WGS-MV-02B	No <sup>(1)</sup>
WGS Discharge Isolation Valve	WGS-PL-V051	No

##### Note:

1. The WGS activated carbon delay beds (WGS-MV-02A and B) are designed to ~~1/2~~one-half SSE .

# AP1000 TECHNICAL REPORT REVIEW

## Response to Request For Additional Information (RAI)

Table 2.3.11-2 Inspections, Tests, Analyses, and Acceptance Criteria		
Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the WGS is as described in the Design Description of this Section 2.3.11.	Inspection of the as-built system will be performed.	The as-built WGS conforms with the functional arrangement as described in the Design Description of this Section 2.3.11.
2. The equipment identified as having seismic design requirements in Table 2.3.11-1 can withstand seismic design basis loads without loss of its structural integrity function. <del>Deleted.</del>	<p>i) Inspection will be performed to verify that the equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island<del>Deleted.</del></p> <p>ii) Type tests, analyses, or a combination of type tests and analyses of seismically designed equipment will be performed<del>Deleted.</del></p> <p>iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions<del>Deleted.</del></p>	<p>i) The equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island<del>Deleted.</del></p> <p>ii) A report exists and concludes that the seismically designed equipment can withstand appropriate seismic design basis loads without loss of its structural integrity function<del>Deleted.</del></p> <p>iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions<del>Deleted.</del></p>

[Rest of Table 2.3.11-2 is unchanged]

### PRA Revision:

None

### Technical Report (TR) Revision:

None