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Your ref: Docket No. 52-006
Our ref: DCP_NRC_002877

May 14, 2010

Subject: AP1000 Response to Request for Additional Information (SRP 3)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 3. 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-SRP3.7.1-SEB1-18

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 Strategy

/Enclosure

1. Response to Request for Additional Information on SRP Section 3

DO63
NRC

cc: D. Jaffe - U.S. NRC 1E
E. McKenna - U.S. NRC 1E
B. Gleaves - U.S. NRC 1E
T. Spink - TVA 1E
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A. Monroe - SCANA 1E
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E. Schmiech - Westinghouse 1E
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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 3

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.7.1-SEB1-18
Revision: 0

Question:

Regulatory Basis:

10 CFR Part 50, Appendix S requires that the horizontal component of the SSE ground motion in the free-field at the foundation elevation have a peak ground acceleration of at least 0.1g together with an appropriate response spectrum.

Issue:

AP1000 DCD, Revision 17, Section 3.7.1, "Design Response Spectra," states that the design response spectra are applied at the foundation level in the free field at hard rock sites and at the finished grade in the free field at firm rock and soil sites. NRC Regulation, 10 CFR Part 50, Appendix S, requires that the horizontal component of the SSE ground motion in the free-field at the foundation elevation (i.e., bottom of foundation) have a peak ground acceleration of at least 0.1g together with an appropriate response spectrum. NRC Standard Review Plan Section 3.7.1 provides additional information in this regard. Given that the AP1000 CSDRS is applied at the finished grade for firm rock and soil sites, the staff cannot make a determination of the PGA and associated response spectra at the foundation elevation in the free-field for each of the generic sites used to evaluate SSI effects.

Request:

To address the above regulatory requirement, the staff requests that the applicant provide free-field in-column response spectra and associated PGA generated for each of the generic site columns (firm rock and soil sites) considered.

Westinghouse Response:

As requested by the NRC staff, Westinghouse has plotted the in-column response spectra at the basemat elevation for each of the generic sites. As seen from the plots given in Figure RAI-SRP3.7.1-SEB1-18-1 the peak horizontal ground acceleration (PGA) are all above 0.1g.

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

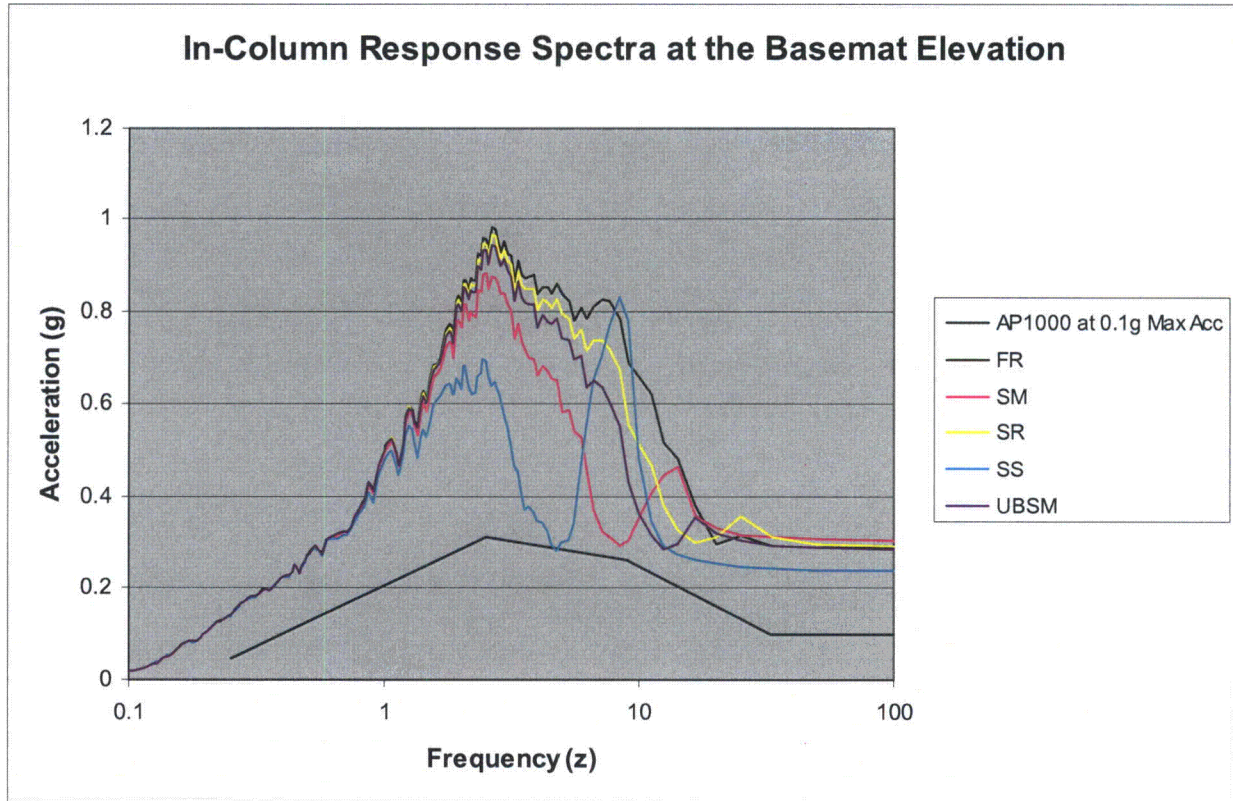


Figure RAI-SRP3.7.1-SEB1-18-1 – In-Column Response Spectra at the Basemat Elevation

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None