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Your ref: Docket No. 52-006
Our ref: DCP/NRC2143

May 28, 2008

Subject: AP1000 Responses to Requests for Additional Information (SRP3.7.2)

Westinghouse is submitting responses to the NRC requests for additional information (RAIs) on SRP Section 3.7.2. These RAI responses are submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in the responses is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

Responses are provided for RAI-SRP3.7.2-SEB1-01 and -02, as sent in emails from Mike Miernicki to Sam Adams dated April 16, 2008 and April 30, 2008 respectively. These responses complete all requests received to date for SRP Section 3.7.2.

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,

A handwritten signature in black ink, appearing to read "Robert Sisk".

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

/Enclosure

1. Responses to Requests for Additional Information on SRP Section 3.7.2

cc: D. Jaffe - U.S. NRC 1E
E. McKenna - U.S. NRC 1E
M. Miernicki - U.S. NRC 1E
P. Ray - TVA 1E
P. Hastings - Duke Power 1E
R. Kitchen - Progress Energy 1E
A. Monroe - SCANA 1E
J. Wilkinson - Florida Power & Light 1E
C. Pierce - Southern Company 1E
E. Schmiech - Westinghouse 1E
G. Zinke - NuStart/Entergy 1E
R. Grumbir - NuStart 1E
B. LaPay - Westinghouse 1E

ENCLOSURE 1

Responses to Requests for Additional Information on SRP Section 3.7.2

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP-3.7.2-SEB1-01
Revision: 0

Question:

Interaction of Seismic Category II and Non-Seismic Structures with Seismic Category I Structures, Systems and Components (SSCs)

The AP1000 DCD, REV 16, Tier 2, Section 3.7.2.8, states, "Non-seismic structures are evaluated to determine that their seismic response does not preclude the safety functions of seismic Category I structures, systems, or components. This is accomplished by satisfying one of the following:

- The collapse of the non-seismic structure will not cause the non-seismic structure to strike a seismic Category I SSC.
- The collapse of the non-seismic structure will not impair the integrity of the seismic Category I SSCs.
- The structure is classified as seismic Category II and is analyzed and designed to prevent its collapse under the safe-shutdown earthquake."

The staff requests the following information:

1. For the AP1000 Turbine Building (classified as non-seismic), identify which of the above criteria are being satisfied and demonstrate the technical basis (as was done for the Radwaste and Annex Buildings).

Westinghouse Response:

The AP1000 Turbine Building in the past licensing certification (e.g., AP1000 hard rock sites) it was demonstrated, via criteria given in 2nd bullet above, that the collapse of the non-seismic structure will not impair the integrity of the seismic Category I SSCs. This was demonstrated by the following:

- The adjacent Auxiliary Building structural integrity will not be lost with the failure of the Turbine Building since the structure is designed with eccentric bracing to UBC-97, Zone 3 with an Importance Factor of 1.0 in order to prevent its collapse under the safe-shutdown earthquake. Further, the lateral bracing system complies with the seismic requirements for eccentrically braced frames given in section 9.3 of the AISC Seismic Provisions for Structural Steel Buildings.

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Response to Request For Additional Information (RAI)

- It is not likely that the size and energy of debris from the turbine building will be large enough to result in penetration through the Auxiliary Building roof structure. The kinetic energy associated with the impact would be less than the energy associated with tornado missiles for which the Auxiliary Building roof is designed.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

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Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP3.7.2-SEB1-02
Revision: 0

Question:

The design of the Radwaste building has been amended to incorporate three new addition liquid waste monitor tanks and the associated piping systems (see TR116). Provide a reanalysis to show that the collapse of the Radwaste building due to safe shutdown earthquake (SSE) or other extreme environmental events will not impair the structural integrity of the adjacent nuclear island (NI) structures.

Westinghouse Response:

The design of the Radwaste building is classified as nonseismic and is designed to the seismic requirements of the Uniform Building Code, Zone 2A with an Importance Factor of 1.25. The design of neighboring seismic category I structures is such that a collapse of the Radwaste building would not compromise the structural integrity of the building. Relative to the Radwaste building, the only neighboring NI seismic category I structure is the Auxiliary building.

In the evaluation of the potential impact from a seismic event of the Radwaste building onto the Auxiliary building, the participating mass during impact is from the roof adjacent to the Auxiliary building. The other masses associated with the Radwaste building will not participate due to their separation from the Auxiliary building.

The three new liquid waste monitor tanks are located in the Radwaste building between wall line FR and GR in Figure RAI-SRP3.7.2-SEB1-02- 1. As seen in this figure, the tanks are located in the area of the Radwaste building that extends beyond the Auxiliary building, which separate them from the Auxiliary building. Further, the additional three tanks are supported at the foundation level as shown in Figure RAI-SRP3.7.2-SEB1-02-2. Therefore, their mass will not participate in the potential impact of the Radwaste building onto the Auxiliary building.

It can be concluded, that the addition of three new liquid waste monitor tanks will not compromise the structural integrity of the neighboring Auxiliary building.

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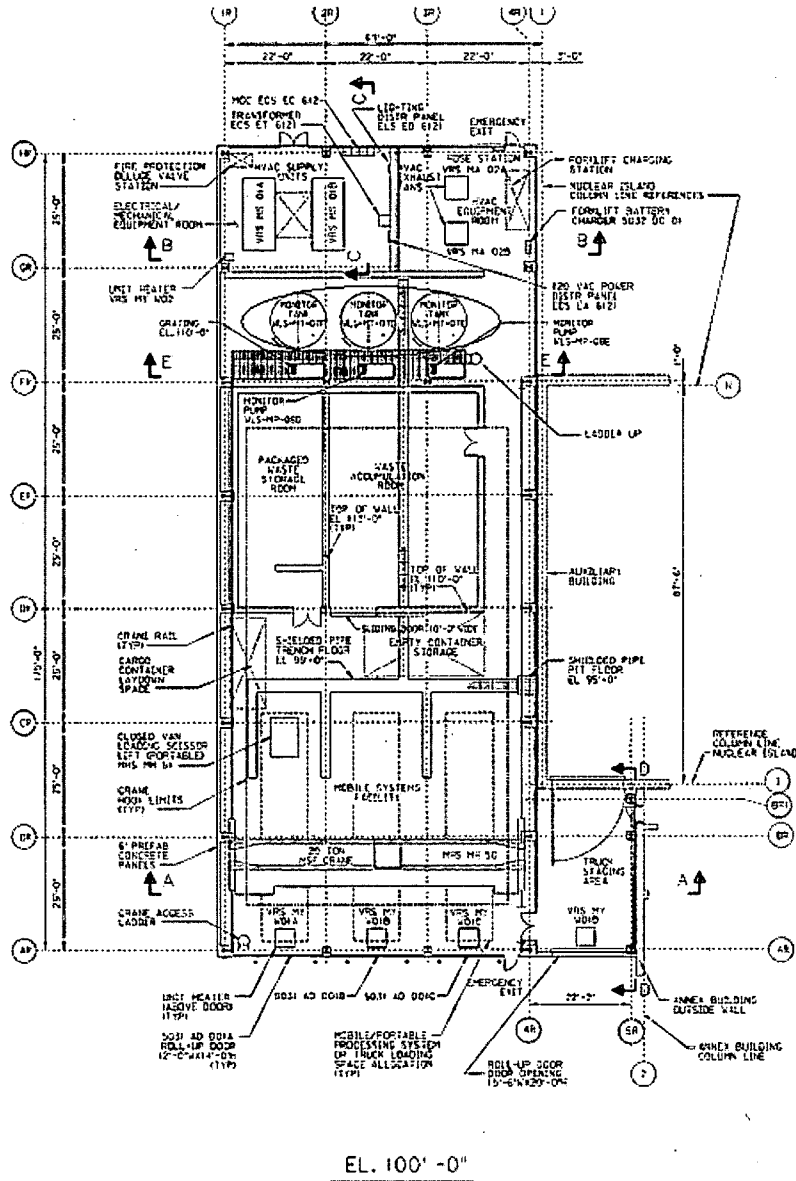


Figure RAI-SRP3.7.2-SEB1-02- 1: Radwaste Building El 100'

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

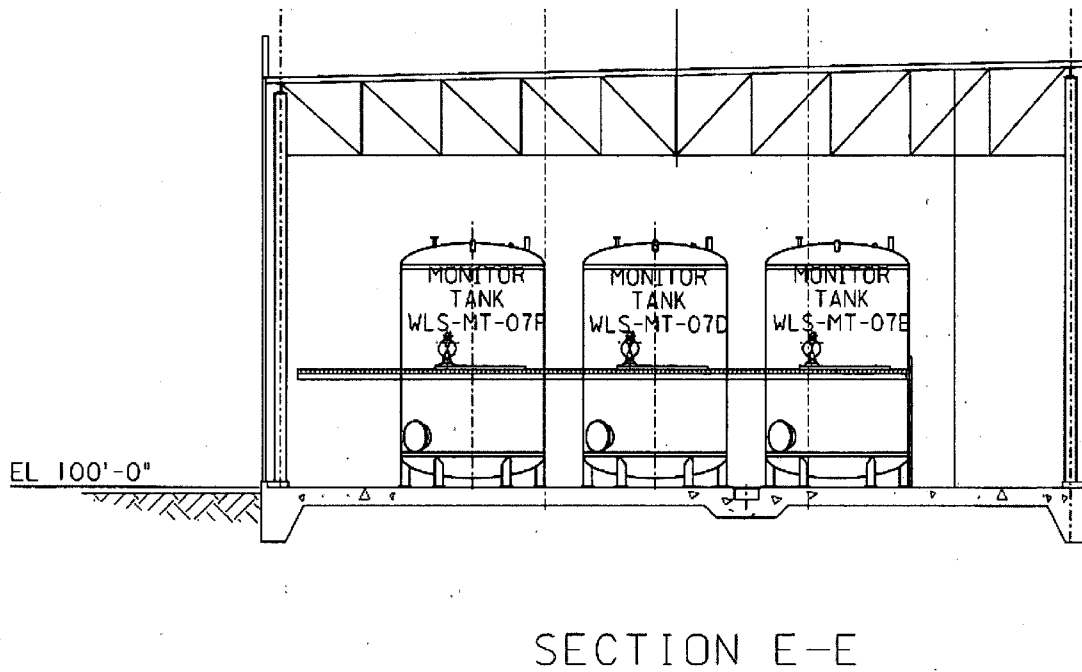


Figure RAI-SRP3.7.2-SEB1-02- 2: Section E-E Radwaste Building

References:

1. MT3L-V1-001 "General Arrangement of MT3L Effluent, Waste Monitor and Waste Holdup Tanks"
2. APP-GW-GLN-116 "Additional Liquid Radwaste Monitor Tanks and Radwaste Building Extension"

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None