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U.S. Nuclear Regulatory Commission
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Your ref: Docket No. 52-006
Our ref: DCP/NRC2279

October 17, 2008

Subject: AP1000 Response to Request for Additional Information (SRP14.3.2)

Westinghouse is submitting a response to the NRC request for additional information (RAI) on SRP Section 14.3.2. This RAI response is submitted in support of the AP1000 Design Certification Amendment Application (Docket No. 52-006). The information included in the response is generic and is expected to apply to all COL applications referencing the AP1000 Design Certification and the AP1000 Design Certification Amendment Application.

A response is provided for RAI-SRP14.3.2-CCIB-01 as sent in an email from Dave Jaffe to Sam Adams dated June 26, 2008. This response completes nine of twelve requests received to date for SRP Section 14.3.2. A response for RAI-SRP14.3.2-CCIB-02,-03, and -07 through -12 under letter DCP/NRC2263 dated September 16, 2008.

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,

R. A. Lindgren/FOR

Robert Sisk, Manager
Licensing and Customer Interface
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/Enclosure

1. Response to Request for Additional Information on SRP Section 14.3.2

DO63
NRO

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	G. Zinke	-	NuStart/Entergy	1E
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ENCLOSURE 1

Response to Request for Additional Information on SRP Section 14.3.2

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP14.3.2-CCIB-01
Revision: 0

Question:

In Table 2.1.1-1, Item 5, the design commitment states the following: "The lift height of the Refueling Machine (RM) and Fuel Handling Machine (FHM) masts is limited such that the minimum required depth of water shielding is maintained." The minimum required depth of water shielding is specified in the Tier 2 Sections 9.1.2.2, 9.1.4.2.3, and 9.1.4.3.7 and Westinghouse Technical Report 121 (APP-GW-GLN-121) as 9.5 feet above the top of a fuel assembly.

The schematic, Attachment 3, provided in TR-121 shows that 24.8 feet of water is required above the top of the irradiated fuel assemblies seated in the spent fuel storage racks to move irradiated spent fuel assemblies and requires a minimum depth of water shielding of 9.5 feet above the top of active fuel in a fuel assembly being moved. Assuming the same operating deck elevation and water level for the reactor refueling cavity as the spent fuel pool, 24.5 feet of water is required above the top of the reactor vessel flange to provide the minimum depth of water shielding of 9.5 feet for spent fuel movement. However, technical specification sections 3.7.5 and 3.9.4, respectively, require the SFP water level to be greater than or equal to 23 feet over the top of irradiated fuel assemblies seated in the storage racks and the refueling cavity water level to be greater than or equal to 23 feet above the top of the reactor vessel flange for spent fuel movement.

The ITAAC in Table 2.1.1-1, Item 5 appears to be in disagreement with the technical specifications stated above. Explain the apparent discrepancy between what is required in the acceptance criteria for Item 5 and the 23 feet that is required in the technical specifications stated above.

Westinghouse Response:

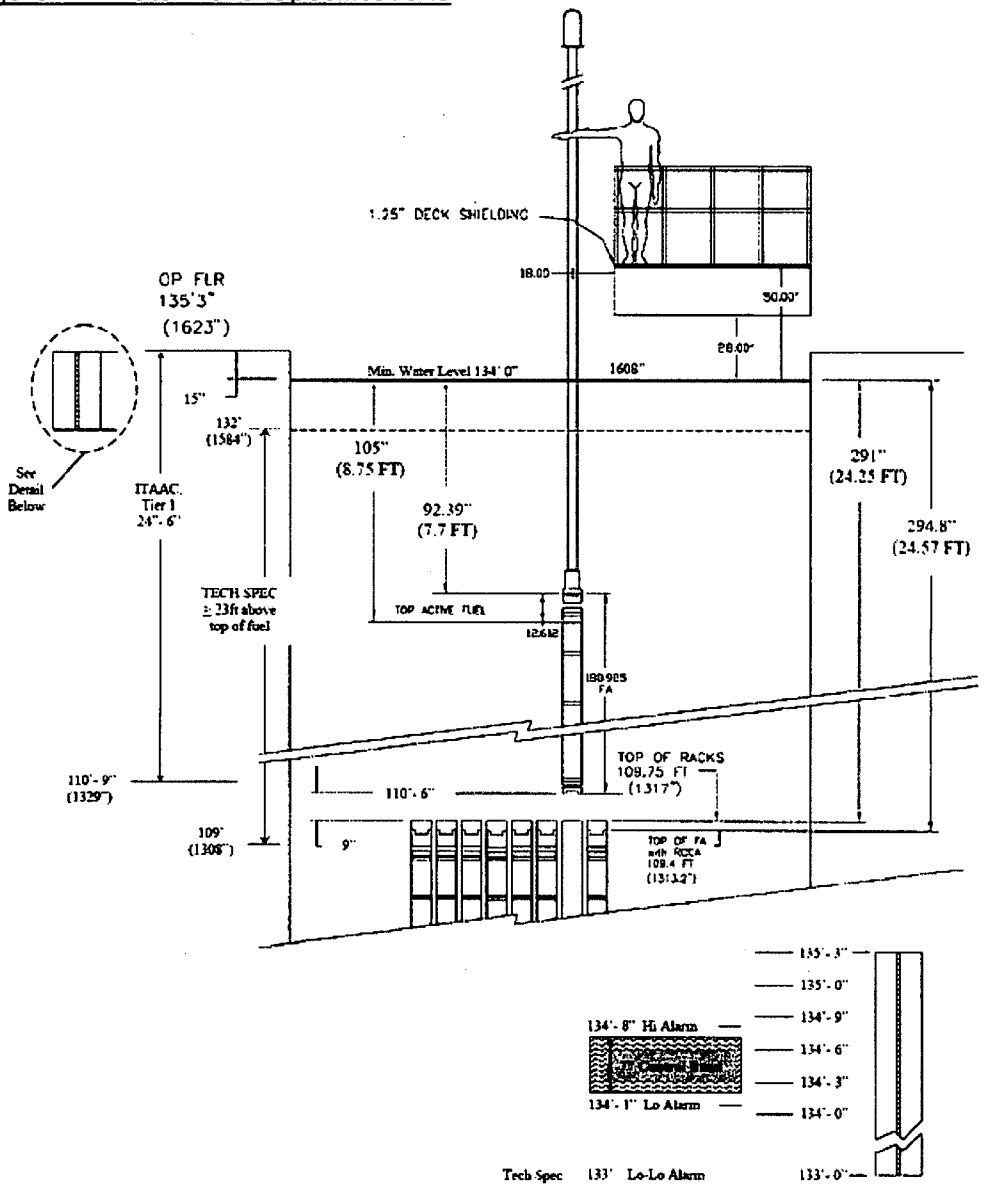
The sections of the DCD which specify the minimum height above the fuel to be 9.5 feet when fuel is being moved was updated in Rev. 17 to reflect an approved change to 8.75 feet. The current analysis shows that if 8.75 feet of water is maintained above the top of active fuel, dose rates are at or below 2.5 mRem per hour.

The current design of the Spent Fuel Pool design requires 23 feet above the active fuel in its stored position, which is given in tech specs. There are three safety related sensors available to signal when the minimum of 23 feet above the active fuel has been exceeded.

With the pool at its minimum normal elevation (134'-0") the distance between the top of the moving fuel and the surface of the water is maintained at the 8.75 feet value. Also, if the fuel is

being moved at the minimum normal water level (134' 0"), there are 9 inches of clearance between the bottom of the fuel and the top of the racks to ensure an acceptable amount of clearance. Figure 1 reflects the current design.

Figure 1 – Water Level Specifications



AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

Design Control Document (DCD) Revision:
None

PRA Revision:
None

Technical Report (TR) Revision:
None