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Your ref: Docket No. 52-006
Our ref: DCP/NRC2147

May 30, 2008

Subject: AP1000 Responses to Requests for Additional Information (SRP9.1.1)

Westinghouse is submitting responses to the NRC requests for additional information (RAIs) on SRP Section 9.1.1. 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-SRP9.1.1-SRSB-01 through -04, as sent in an email from Perry Buckberg to Sam Adams dated May 6, 2008. These responses complete all requests received to date for SRP Section 9.1.1.

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 9.1.1

cc: D. Jaffe - U.S. NRC 1E
E. McKenna - U.S. NRC 1E
P. Buckberg - 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
J. Iacovino - Westinghouse 1E

ENCLOSURE 1

Responses to Requests for Additional Information on SRP Section 9.1.1

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP9.1.1-SRSB-01
Revision: 0

Question:

DCD Subsection 9.1.1.2 does not provide the value of the capacity of the new fuel handling crane.

What is the actual capacity of the new fuel handling crane? This value should be listed.

Westinghouse Response:

The actual lift capacity is 2,027 pounds. This value is reported in DCD rev 16 subsection 9.1.1.2.1 New Fuel Rack Design under B and D.

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP9.1.1-SRSB-02
Revision: 0

Question:

TR106 and TR44 indicate that a structural analysis for the new fuel handling crane uplift analysis was performed based on an uplift load of 2000 pounds. DCD Subsection 9.1.1.2.1.B, Rev. 16, indicates that an analysis was performed based on 2027 pounds.

Please supply support for the 2027 pounds indicated in the DCD.

Westinghouse Response:

The new fuel handling uplift analysis has been performed for an uplift force of 2,027 pounds. The 2,027 pounds represents the weight of a new fuel assembly with control elements and handling tool. It also is the weight used in the new fuel storage rack drop analysis. This is a Region 1 rack and can withstand an uplift force of 5,000 pounds.

Reference:

1. APP-FS01-S3C-001 Rev. 0 AP1000 New Fuel Storage Rack Structural/Seismic Analysis

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP9.1.1-SRSB-03
Revision: 0

Question:

Regarding DCD subsection 9.1.1.2.1.C, Fuel Assembly Drop Accident Analysis, TR106 indicates that TR44 performed the structural analysis in a fuel assembly drop accident analysis based on 2027 pounds. TR44 does not appear to specify the weight used in the analysis. Please confirm that the drop test was performed based on the total combined weight of the fuel assembly, control rod assembly, and handling tool (2,027 pounds).

Westinghouse Response:

Clarification- Westinghouse did not perform a physical drop test. The fuel assembly drop analysis was performed using LSDYNA. The analysis was performed based on the total combined weight of the fuel assembly, control rod assembly, and handling tool (2,027 pounds).

Reference:

1. APP-FS02-Z0C-001, Rev. 0 Analysis of AP1000 Fuel Storage Racks Subjected to Fuel Drop Accidents

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None

AP1000 TECHNICAL REPORT REVIEW

Response to Request For Additional Information (RAI)

RAI Response Number: RAI-SRP9.1.1-SRSB-04
Revision: 0

Question:

The existing DCD section 9.1.2.3 stated that the purchase specification for the spent fuel storage racks will require the vendor to perform a criticality analysis of the spent fuel storage rack. Revision 16 removes the wording "the vendor to perform."

Does the removal of the wording "the vendor to perform" create a new COL action item to perform the criticality analysis of the spent fuel storage racks, or is it a reflection that Westinghouse has already performed the criticality analysis for this design?

Westinghouse Response:

No new COL action item will be needed. The design of the AP1000 spent fuel storage racks was done by Holtec. However, the criticality analysis was led by Westinghouse and has already been performed and reviewed by the NRC with no RAIs issued. The criticality analysis is documented in Westinghouse Calculation APP-FS02-N1C-002, Rev. 1 AP1000 Spent Fuel Storage Racks Criticality Analysis.

Reference:

1. APP-FS02-N1C-002, Rev. 1 AP1000 Spent Fuel Storage Racks Criticality Analysis

Design Control Document (DCD) Revision:

None

PRA Revision:

None

Technical Report (TR) Revision:

None