

May 26, 2011

MEMORANDUM TO: Eileen M. McKenna, Chief
AP1000 Projects Branch 2
Division of New Reactor Licensing
Office of New Reactors

FROM: William C. (Billy) Gleaves, Sr. Project Manager
AP1000 Projects Branch 2 /RA/
Division of New Reactor Licensing
Office of New Reactors

SUBJECT: SUMMARY OF A CATEGORY 1 MEETING WITH
WESTINGHOUSE ELECTRIC COMPANY REGARDING AP1000
SHIELD BUILDING DESIGN METHODOLOGY, IN ROCKVILLE,
MARYLAND ON MAY 17, 2011

The U.S. Nuclear Regulatory Commission (NRC) held an open Category I public meeting, May 17, 2011, with Westinghouse Electric Company (Westinghouse), at the NRC headquarters building in Rockville, Maryland. The NRC's Office of New Reactors staff and contractors met with Westinghouse technical and licensing staff, their contractors, and other stakeholders to discuss preliminary results of Westinghouse's response to NRC comments on the differences between the structural analyses given in the design certification amendment (DCA) and the Shield Building (SB) Design Report. Specifically, Westinghouse gave both non-proprietary and proprietary presentations that provided, to the extent possible, the Westinghouse response to the NRC comment on the application of certain ACI-349 load combinations in certain parts of the AP1000 SB structural modules. Questions from the audience and the public were helpful in shedding light on the issue, the process, and the timelines related to this action. The purpose of this meeting summary is to briefly describe the meeting, its participants, document the presentation slides, and to delineate results.

This Category I meeting was open to the public for the first part and closed in the second part due to the proprietary nature of the design and the proprietary design methodology that would be discussed. The open portion of the meeting closed at 9:55 a.m. after public comments were received and discussed. There were 36 persons in attendance at the meeting location, and 2 persons attending by conference call. The meeting was held between at 9:00 p.m. and 5:00 p.m. EDT.

Enclosed with this memorandum are materials relevant to this meeting. The enclosures are as follows: 1) the meeting attendee list, 2) Westinghouse's proprietary slides, and 3) non-proprietary meeting slides.

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Discussion

This meeting was the second face-to-face meeting on this subject (the first being April 12-13), to discuss NRC's concerns with respect to Westinghouse's use of ACI-349 load combinations for the analysis of the SB modules. During the April meeting, conference calls, the staff had learned that Westinghouse did not numerically combine ambient thermal loads (from temperatures outside and inside the shield building) with safe shutdown earthquake loads, judging that the loads would not be significant and would be relieved by cracking. These concerns were identified during the closure process for Confirmatory Items (CIs) from the AP1000 Advanced Final Safety Analysis report. The scope of this meeting was the methodology and use of load combinations as presented in both the AP1000 Design Control Document (DCD) in Section 3.8.4 and the AP1000 SB Design Report. This meeting was to discuss the staff comments and concerns with respect to the review of Westinghouse's use of, and exceptions to, load combinations required by the ACI-349 Code. Specifically, the meeting was to address what steps Westinghouse intended to take to close the CI related to Westinghouse's analysis of and information provided in the DCD and supporting documentation.

The meeting began with comments by NRC staff regarding the goal of the meeting. Westinghouse made its presentation of the slides attached to this summary. The staff discussed with Westinghouse on the meaning of the slides throughout the meeting. Some preliminary information was discussed about locations in the shield building where the thermal loads may be important, such as where part of the shield building adjoins the temperature-controlled auxiliary building and part is exposed to the extreme outside temperature (-40 degrees Fahrenheit is the design basis value).

Westinghouse stated that in response to NRC's concerns, Westinghouse would, on a schedule to be determined, revise its analysis of the SB modules under thermal + SSE loads, and revise the associated calculation sheets, the SB Design Report, and the DCD as appropriate. The documents affected are the proposed DCD (Sections 3.7 & 3.8 and Appendix 3G and 3H), the SB design methodology report, and the GLR-602 document that contains Tier 2* requirements on Proprietary Information. Westinghouse stated that in the interim, draft documents will be sent to NRC, and the final versions of these documents are due May 31, 2011. In addition to the discussion of the load combination issue, discussed above, Westinghouse explained their discovery of a difference between the current proposed DCD and that information proposed in a Westinghouse response to an NRC Action Item #21. Westinghouse stated that the difference is in the analysis method for the PCS tank, located on the SB roof. Westinghouse stated that this difference will be rectified in the upcoming DCD Revision 19 and Westinghouse will complete all revised calculations to support the Action Item #21 response before submittal of Revision 19. The staff noted that the technical content described in the Westinghouse slides are preliminary and likely to change, and may not represent the actual conclusions which will apply to the overall issues and ultimate resolution of the staff concerns. The staff also noted that a significant change to the DCA may require a public meeting to be held where these changes could be identified in an open and public manner as possible.

E. McKenna

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Conclusion

The staff thanked the participants for their participation, reinforced the priority of this design center in NRC/NRO, the importance of Westinghouse complete response submitted on the docket, and expressed anticipation for Westinghouse's submittal dates.

Docket No. 52-006

Enclosures:

As stated

Conclusion

The staff thanked the participants for their participation, reinforced the priority of this design center in NRC/NRO, the importance of Westinghouse complete response submitted on the docket, and expressed anticipation for Westinghouse's submittal dates.

Docket No. 52-006

Enclosures:

As stated

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OFFICE	LA:DNRL/NWE2	PM:DNRL/NWE2	BC:DNRL/NWE2
NAME	RButler*	BGleaves	EMcKenna (JCruz for)
DATE	5/25/2011	5/26/2011	5/26/2011

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**AP1000 Shield Building Closed Meeting
Meeting Attendance List
May 17, 2011**

<u>Name</u>	<u>Organization</u>
David Matthews	NRC/NRO/DNRL
Mohamed Shams	NRC/NRO/DE
Tom Bergman	NRC/NRO/DE
Bret Tegeler	NRC/NRO/DE
Eileen McKenna	NRC/NRO/DNRL
Rich Morante	NRC/Consultant BNL
Billy Gleaves	NRC/NRO/DNRL
Pravin Patel	NRC/NRO/DE
Jose Pires	NRC/RES
Weidong Wang	NRC/ACRS
Perry Buckberg	NRC/NRO/DNRL
Ravi Joshi	NRC/NRO/DNRL
Ann Hodgdon	NRC/OGC
Peter Wen	NRC/ACRS
John McKirgan	NRC/NRO/DE
Pat Castleman	NRC/Commission
Don Habib	NRC/NRO/DNRL
Rolf Ziesing	Westinghouse/Licensing
Mike Corletti	Westinghouse/Engineering
Stanley Ritterbusch	Westinghouse/Licensing
Donald Lindgren	Westinghouse/Licensing
Ashley Francis	Westinghouse/Engineering
Keith Coogler	Westinghouse/Engineering
Tod Baker	Westinghouse/Engineering
Lee Tunon-Sanjur	Westinghouse/Engineering
John McInerney(sp)	Westinghouse/Engineering
John Deblasio	Westinghouse/Engineering
Richard Orr	Westinghouse/Consultant
Robert Kennedy	RPK SMC
Mike Melton	Westinghouse
Amit Varma	Westinghouse/Purdue Univ.
Eddie Grant	NuStart/Excel
Don Moore	Southern Nuclear Co
C.R. Pierce	Southern Nuclear Co
Bob Whorton	SCE&G
Jana Bergman	Scientech
Alan Levin	AREVA
X Cassidy*	NPR Associates
Bill Freebairn*	Nucleonics Week

*attended by teleconference

Westinghouse Proprietary Meeting Handouts

Enclosure 2

Non-Proprietary Version of Westinghouse Meeting Handouts