

July 1, 2009

ORGANIZATION: General Electric Hitachi (GEH)
PROJECT: Economic Simplified Boiling Water Reactor (ESBWR) Design Certification
SUBJECT: SUMMARY OF THE JUNE 23, 2009, PARTIALLY CLOSED MEETING WITH GENERAL ELECTRIC-HITACHI REGARDING CONTROL ROOM HABITABILITY AREA

On June 23, 2009, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting with General Electric-Hitachi (GEH), at the GEH office, 1299 Pennsylvania Ave, NW, Suite 900, Washington, DC. The purpose of the meeting was to discuss control room habitability area (CRHA) analysis for the Economic Simplified Water Reactor (ESBWR) design certification. The meeting agenda is provided as Enclosure 1. Attendees are identified in Enclosure 2.

The meeting summary, meeting agenda, and list of attendees are available through the Agency wide Documents Access and Management System (ADAMS) at ADAMS Accession Number ML091760538. ADAMS is the system that provides text and image files of NRC's public documents. Documents are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. If you do not have access to ADAMS or have problems accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) staff at 1-800-397-4209, 301-415-4737, or pdr@nrc.gov.

Portions of this meeting were closed because the details of the CRHA analysis are proprietary information. A non-proprietary summary of the meeting is provided in Enclosure 3.

At this meeting, no comments were received from members of the public and no public meeting feedback forms were received. Please direct any inquiries to me at 301-415-3179, ilka.berrios@NRC.gov.

Sincerely,

/RA/

Ilka T. Berrios, Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos.: 52-010

Enclosures:
As stated

cc w/encl: See next page

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SUBJECT: SUMMARY OF THE JUNE 23, 2009, MEETING TO DISCUSS ESBWR CRHA
ISSUES DATED JULY 1, 2009

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AGENDA

PARTIALLY CLOSED MEETING WITH GEH TO DISCUSS CONTROL ROOM HABITABILITY JUNE 23, 2009

<u>Time</u>	<u>Topic</u>
9:00 a.m. - 9:05 a.m.	Opening Remarks & Introductions
9:05 a.m. - 10:00 a.m.	GEH general discussion of the licensing basis for CRHA analysis
10:00 a.m. - 10:30 a.m.	Discussion on Use of CONTAIN analysis for ESBWR licensing basis for CRHA*
10:30 a.m. - 10:45 a.m.	Break
10:45 a.m. - 11:45 a.m.	Continue Discussion on Use of CONTAIN analysis for ESBWR licensing basis for CRHA*
11:45 a.m. -12:45 p.m.	Lunch
12:45 p.m. - 2:30 p.m.	Discussion on Use of Supporting GOTHIC analysis for CR Air Mixing *
2:30 p.m. - 2:45 p.m.	Break
2:45 p.m.- 3:45 p.m.	Summary of CRHA analysis results*
3:45 p.m.	Adjourn

***Closed Session**

SIGN-IN SHEET

**PARTIALLY CLOSED MEETING WITH GEH
TO DISCUSS CONTROL ROOM HABITABILITY
JUNE 23, 2009**

<u>Name</u>	<u>Organization</u>
Art Alford	GEH
Mike Arcaro	GEH
Antonio Barrett	GEH
Mike Sulva (PT)	GEH
Rick Wachowiak	GEH
Wayne Marquino	GEH
David Piepmeyer (PT)	GEH
Dennis Galvin	NRC
Amy Cubbage	NRC
Edwin Forrest	NRC
Michael Snodderly	NRC
Bruce Bovol	NRC
Ilka Berrios	NRC

MEETING SUMMARY

PARTIALLY CLOSED MEETING WITH GEH TO DISCUSS CONTROL ROOM HABITABILITY JUNE 23, 2009

On June 23, 2009, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting with General Electric-Hitachi (GEH), to discuss the Economic Simplified Water Reactor (ESBWR) control room habitability area (CRHA).

During this meeting GEH and NRC discussed the CRHA issue, including RAIs 3.11-18, 9.4-29 S03, and draft 6.4-21 S01 as they described the movement of air and uniform mixing. GEH stated that the CONTAIN Analysis is the Licensing Basis for CRHA and that the GOTHIC Analysis is a supporting analysis referenced for validation. The discussion resulted in NRC requests of GEH are identified as GEH Action Items below.

GEH agreed to provide information on the docket to address the following topics:

- Explain the reason that temperature at 72 hours is not sensitive to changes in CRHA volume. Volume changes from 96000 cu ft to 78000 cu ft and from 96000 cu ft to 48000 cu ft showed essentially no increase in temperature although temperature increase was expected.
- Explain the reason that using engineering vent flows based on constant volume is acceptable with the drop in CRHA pressure as much as -6 inches w.g. in the first two hours. The staff is concerned that using a constant volume and allowing the pressure to change results in additional heat being removed than if the flows were based on a mass flow rate which would essentially keep the CRHA pressure constant. The staff estimated the unaccounted for heat loss could be between 500 and 1500 watts depending on temperature differences.
- Provide a reassessment of Operator Action/Attention to control CRHA pressure variation in light of changing temperatures and densities with a constant volume supply flow rate (466 cfm) and a manually adjusted orifice control.
- Evaluate the temperature differences required to transfer heat into the thermal mass during the 0-72 hour period and relate to the amount of heat that is required to be removed.
- Submit a letter with an affidavit to transmit CONTAIN inputs and outputs, GOTHIC inputs, and reports to the NRC. Note: a CD of GOTHIC input and CONTAIN input and output, a preliminary CONTAIN report and a GOTHIC summary report were provided to the NRC during the meeting.
- With respect to tracer gas testing of the CRHA, identify the amount of unfiltered inleakage that is allocated for access and egress. Confirm that the tracer gas testing criteria identified in the Programs and Manuals section of the Technical specification will be based on the unfiltered inleakage used in the dose consequence analyses minus the amount of unfiltered inleakage assumed for access and egress.

Enclosure 3

- Submit response to RAI 6.4-21 S01.

Portions of this meeting were closed because the details of the CRHA analysis are proprietary information.

DC GE - ESBWR Mailing List

(Revised 06/10/2009)

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