

GE-Hitachi Nuclear Energy Americas LLC

James C. Kinsey
Project Manager, ESBWR Licensing

PO Box 780 M/C A-55
Wilmington, NC 28402-0780
USA

T 910 675 5057
F 910 362 5057
jim.kinsey@ge.com

MFN 07-472

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U.S. Nuclear Regulatory Commission
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Subject: **Response to Portion of NRC Request for Additional Information
Letter No. 100 - Related to ESBWR Design Certification Application -
Containment Systems - RAI Number 6.2-172**

Enclosure 1 contains GE-Hitachi Nuclear Energy Americas LLC (GEH) response to the subject NRC RAI transmitted via the Reference 1 letter.

If you have any questions or require additional information, please contact me.

Sincerely,



James C. Kinsey
Project Manager, ESBWR Licensing

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NRO

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Reference:

1. MFN 07-327, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 100 Related to ESBWR Design Certification Application*, May 30, 2007

Enclosure:

1. MFN 07-472 - Response to Portion of NRC Request for Additional Information Letter No. 100 - Related to ESBWR Design Certification Application - Containment Systems - RAI Number 6.2-172

cc: AE Cubbage USNRC (with enclosures)
GB Stramback GEH/San Jose (with enclosures)
RE Brown GEH/Wilmington (with enclosures)
eDRF 0000-0071-5294

Enclosure 1

MFN 07-472

Response to Portion of NRC Request for

Additional Information Letter No. 100

Related to ESBWR Design Certification Application

Containment Systems

RAI Number 6.2-172

NRC RAI 6.2-172:

"Integrated containment cooling tests have been completed on a full-height reduced section test facility, and the results have been correlated with TRACG computer program analytical predictions; this computer program is used to show acceptable containment performance, which is reported in Subsection 6.2.1.1 and Chapter 15."

Please revise this statement in the DCD to include the specific reference(s) that provide the basis for the statement "... results have been correlated with TRACG computer program analytical prediction ..."

GEH Response:

A reference will be added to DCD Tier 2, Subsection 6.2.2.3, for qualification of TRACG against GIRAFFE Systems Interaction Tests.

DCD Impact:

DCD Tier 2, Subsection 6.2.2.3, last paragraph, will be revised and a new Reference 6.2-8 will be added as shown in the attached markup.

6.2.2.3 Design Evaluation

[Last Paragraph]

The intent of Criterion 40, testing of containment heat removal system is satisfied as follows:

- The structural and leak-tight integrity can be tested by periodic pressure testing;
- Functional and operability testing is not needed because there are no active components of the system; and
- Performance testing during in-plant service is not feasible; however, the performance capability of the PCCS was proven by full-scale PCCS condenser prototype tests at a test facility before their application to the plant containment system design. Performance is established for the range of in-containment environmental conditions following a LOCA. Integrated containment cooling tests have been completed on a full-height reduced-section test facility, and the results have been correlated with TRACG computer program analytical predictions; this computer program is used to show acceptable containment performance (Reference 6.2-8, Section 5.3), which is reported in Subsection 6.2.1.1 and Chapter 15.

6.2.9 References

[New Reference 6.2-8]

6.2-8 TRACG Qualification for SBWR, NEDC-32725P, Rev. 1, August 2002.