



HITACHI

GE Hitachi Nuclear Energy

James C. Kinsey
Vice President, 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 07-419, Supplement 1

Docket No. 52-010

December 6, 2007

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

**Subject: Response to Portion of NRC Request for Additional
Information Letter No. 109 Related to ESBWR Design
Certification Application, RAI Number 22.5-15S01**

The purpose of this letter is to submit the GE Hitachi Nuclear Energy (GEH) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) sent by NRC letter dated October 12, 2007 (Reference 1). The initial RAI transmittal (Reference 2) responded to the NRC request of Reference 3. The GEH response to RAI Number 22.5-15S01 is in Enclosure 1.

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

Sincerely,

James C. Kinsey
Vice President, ESBWR Licensing

Reference:

1. MFN 07-555, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 109 Related to ESBWR Design Certification Application*, October 12, 2007.
2. MFN 07-419, Response to Portion of NRC Request for Additional Information Letter No. 101 Related to Regulatory Treatment of Non-Safety Systems (RTNSS) RAI Numbers 22.5-2 through 22.5-4, 22.5-6 and 22.5-15, August 2, 2007.
3. MFN 07-357, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, *Request for Additional Information Letter No. 101 Related to ESBWR Design Certification Application*, June 21, 2007.

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 109 Related to ESBWR Design Certification Application Regulatory Treatment of Non-Safety Systems (RTNSS) RAI Number 22.5-15S01

cc: AE Cubbage USNRC (with enclosure)
GB Stramback GEH/San Jose (with enclosure)
RE Brown GEH/Wilmington (with enclosure)
eDRFSection 0000-0078-1993

Enclosure 1
MFN 07-419, Supplement 1

**Response to Portion of NRC Request for
Additional Information Letter No. 109
Related to ESBWR Design Certification Application
ESBWR Probabilistic Risk Assessment
Regulatory Treatment of Non-Safety Systems (RTNSS)
RAI Number 22.5-15S01**

NRC RAI 22.5-15(original)

Section 19A.2.1, ATWS Assessment, states that [m]ost of SLCS [Standby Liquid Control System] is safety-related and therefore has sufficient regulatory oversight. Please clarify the portions of the SLCS that are non-safety related, and the regulatory oversight (i.e., treatment) specified for those components. Discuss the basis for the determination that regulatory oversight of the SLCS is sufficient with portions of the SLCS categorized as non-safety related.

NRC RAI 22.5-15

Section 19A.2.1, ATWS Assessment, states that most of SLCS [Standby Liquid Control System] is safety-related and therefore has sufficient regulatory oversight. Please clarify the portions of the SLCS that are non-safety related, and the regulatory oversight (i.e., treatment) specified for those components. Discuss the basis for the determination that regulatory oversight of the SLCS is sufficient with portions of the SLCS categorized as non-safety related.

GEH Response

The Standby Liquid Control (SLC) system, which is discussed in DCD Tier 2 Subsection 9.3.5, is safety-related and therefore has regulatory oversight. The statement reading, "Most of SLCS is safety-related and therefore has sufficient regulatory oversight" has been removed from DCD Tier 2 Subsection 19A.2.1.

SLC does have nonsafety-related portions. These portions include the subsystem for nitrogen charging of the accumulators, and the subsystem for boron mixing and makeup of the accumulators. These systems are not required for SLC to perform its safety-related function. They are used to maintain SLC readiness. The functions of these systems are monitored in Technical Specifications and are not required to be RTNSS.

DCD Impact

DCD Tier 2, Subsection 19A.2.1 will be revised in Revision 4. The content of the revision was transmitted to the NRC Staff as Attachment 1 of MFN 07-073, dated July 15, 2007) as a markup of DCD Appendix 19A.

NRC RAI 22.5-15 S01

The response to RAI 22.5-15 provided in MFN 07-419, dated 8/2/2007, states that the Standby Liquid Control (SLC) system includes non-safety-related portions. Some non-safety-related portions (such as nitrogen charging for the accumulators) are used to help maintain the operational readiness of the SLC system, but are not required for the SLC system to perform its safety-related function. Please discuss whether any non-safety-related systems or components are used to monitor the operational readiness of the SLC system, and their consideration as part of the Regulatory Treatment of Non-Safety Systems (RTNSS) program.

GEH Response

Because the operational readiness of the SLC system, and supporting systems, is controlled by Technical Specifications, further regulatory oversight in RTNSS is not necessary.

DCD/NEDO-33201 Impact

No DCD changes will be made in response to this RAI.

No NEDO-33201 changes will be made in response to this RAI.