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MFN 08-086, Supplement 61

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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. 189 Related to ESBWR Design Certification Application RAI Number 14.3-242, Supplement 1**

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 189 dated May 6, 2008 (Reference 1).

Enclosure 1 contains the GEH response to RAI Numbers 14.3-242, Supplement 1.

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

Sincerely,

Richard E. Kingston
Vice President, ESBWR Licensing

D068
NRO

Reference:

1. MFN 08-482, Letter from U.S. Nuclear Regulatory Commission to Robert E. Brown, GEH, *Request For Additional Information Letter No. 189 Related To ESBWR Design Certification Application*, dated May 6, 2008

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 189 Related to ESBWR Design Certification Application DCD Tier 1 RAI Number 14.3-242, Supplement 1

cc:	AE Cubbage	USNRC (with enclosure)
	GB Stramback	GEH/San Jose (with enclosure)
	RE Brown	GEH/Wilmington (with enclosure)
	DH Hinds	GEH/Wilmington (with enclosure)
	eDRF	0000-0081-3372

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Enclosure 1

Response to Portion of NRC Request for Additional Information Letter No. 189 Related to ESBWR Design Certification Application

DCD Tier 1

RAI Number 14.3-242, Supplement 1

RAI 14.3-242, SUPPLEMENT 01

NRC Summary:
Deviation from 10CFR 50.55; IEEE Std. 603-1991 definition.

NRC Full Text:
Conformance to IEEE Std. 603-1991, which the definition of the term "division" is a normative part of, is required by 10 CFR 50.55(a)(h). As a result of RAI 7.1-46,MFN 06-482, dated December 31, 2006, the applicant committed to revising this definition to meet that of the requirements and to be incorporated Revision 3 of the DCD. This change was completed.

The usage of the term "division" as defined by IEEE Std. 603-1991 is required by 10 CFR 50 and as referenced by 10 CFR 52. This term is to be used not just for future designs, as the response suggests, but the completed designs and operating reactors as well. The completed design must establish and always have the capability to maintain the three types of independence noted.

In Revision 4 of the DCD, GEH changed the definition. As RAI 14.3-242 states, the applicants definition of the term "division" is a deviation from IEEE Std. 603-1991 and ,therefore 10 CFR 50.55(a)(h) and would require an exemption. The applicant should refer to 10 CFR 50.12, "Specific Exceptions" which discusses the necessary application, conditions and circumstances necessary for the Commission to grant an exemption from the requirements if the applicants intend to propose a change to the definition of "division."

GEH Response

Tier 1 Section 1.1.1, the definition of division, was modified in DCD Revision 5 to meet the intent of the IEEE 603-1991 definition. The definition currently contained in Section 1.1.1 follows:

> **Division** is the designation applied to a given safety-related system or set of components that enables the establishment and maintenance of physical, electrical, and functional independence from other redundant sets of components.

DCD Impact

Based on the discussion above, no change to the DCD will be made as a result of this response.