



GE Energy

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MFN 07-178

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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. 70 Related to ESBWR Design Certification Application –
Testing Programs – RAI Numbers 14.2-24, 14.2-27, and 14.2-34**

Enclosure 1 contains GE's response to the subject NRC RAIs transmitted via the Reference 1 letter.

If you have any questions or require additional information regarding the information provided here, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Kathy Sedney for".

James C. Kinsey
Project Manager, ESBWR Licensing

Reference:

1. MFN 06-382, Letter from U.S. Nuclear Regulatory Commission to David Hinds, *Request for Additional Information Letter No. 70 Related to ESBWR Design Certification Application*, October 10, 2006

Enclosure:

1. MFN 07-178 – Response to Portion of NRC Request for Additional Information Letter No. 70 Related to ESBWR Design Certification Application – Testing Programs – RAI Numbers 14.2-24, 14.2-27, and 14.2-34

cc: AE Cabbage USNRC (with enclosures)
DH Hinds GE (with enclosures)
RE Brown GE (w/o enclosures)
eDRF 0000-0063-9994

Enclosure 1

MFN 07-178

Response to Portion of NRC Request for

Additional Information Letter No. 70

Related to ESBWR Design Certification Application

Testing Programs

RAI Numbers 14.2-24, 14.2-27 and 14.2-34

NRC RAI 14.2-24

DCD Tier 2, Revision 1, Section 14.2.8.1.42, does not contain sufficient information relative to the expansion, vibration and dynamic effects preoperational test program's conformance with applicable regulatory guides. The applicant is requested to discuss the expansion, vibration and dynamic effects preoperational test program's conformance with Regulatory Guides 1.68 and other applicable regulatory guides. Also provide a discussion relating to exceptions to regulatory positions, if any, and justifications for each exception.

GE Response

With regard to compliance with Regulatory Guide 1.68 relative to thermal expansion, vibration and dynamic effects for the preoperational test program, Subsections 3.9.2.1.1 and 3.9.2.1.2 in DCD Tier 2 have been revised to specifically address compliance with this regulation and other industry standards with respect to safety related piping. The test program conformance with Regulatory Guide 1.68 is described in DCD Tier 2, Subsection 14.2.9.1.

Where applicable, the Test Acceptance Criteria for the thermal expansion, vibration and dynamic effects for the preoperational and/or startup tests will also meet the requirements of the other Regulatory Guides 1.56 and 1.128. Regulatory Guide 1.136 will not be listed in Chapter 14 of the DCD because it is not applicable and is referenced in Subsection 3.8.1.6. In addition, the development of the test criteria will require consideration of the potential adverse flow effects on piping systems recommended in Regulatory Guide 1.20, and in SRP 3.9.2 and SRP 3.9.5.

Regulatory Guides 1.68, 1.56, and 1.20 have been referenced in DCD Subsection 14.2.3 (Titled: Test Program's Conformance with Regulatory Guides). No exceptions to the regulatory positions in the applicable Regulatory Guides are being requested by GE.

Affected Documents

No DCD changes will be made in response to this RAI. Relevant DCD revisions were implemented in DCD Revision 3, based on the response to RAI 14.2-37 (MFN 07-061).

NRC RAI 14.2-27

DCD Tier 2, Revision 1, Section 14.2.8.2.9, does not contain sufficient information relative to the systems expansion test program's conformance with applicable regulatory guides. Therefore the staff requests the applicant to discuss the systems expansion test program's conformance with Regulatory Guides 1.68 and other applicable regulatory guides. Also provide a discussion relating to exceptions to regulatory positions, if any, and justifications for each exception.

GE Response

Please refer to the response to RAI 14.2-24.

Affected Documents

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

NRC RAI 14.2-34

DCD Tier 2, Revision 1, Section 14.2.8.2.10, does not contain sufficient information relative to the system vibration test program's conformance with applicable regulatory guides. The applicant is requested to discuss the vibration test program's conformance with Regulatory Guides 1.68 and other applicable regulatory guides. Also provide a discussion relating to exceptions to regulatory positions, if any, and justifications for each exception.

GE Response

Please refer to the response to RAI 14.2-24.

Affected Documents

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