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MFN 06-308
Supplement 1

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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. 51 Related to ESBWR Design Certification Application – Classification of Structures, Systems and Components – RAI Number 3.2-19 S01**

Enclosure 1 contains a supplemental response to the subject RAI resulting from a November 20, 2006 e-mail request from the NRC. GE's original response was transmitted via the Reference 1 letter.

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

Sincerely,

Kathy Sedney for

James C. Kinsey
Project Manager, ESBWR Licensing

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Reference:

1. MFN 06-308, Letter from David Hinds to U.S. Nuclear Regulatory Commission, *Response to NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – Classification of Structures, Systems and Components – RAI Numbers 3.2-1 through 3.2-62,* September 8, 2006

Enclosure:

1. MFN 06-308, Supplement 1 – Response to Portion of NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – Classification of Structures, Systems and Components – RAI Number 3.2-19 S01

cc:

AE Cubbage	USNRC (with enclosures)
DH Hinds	GE (with enclosures)
RE Brown	GE (w/o enclosures)
eDRF	0000-0063-4374

Enclosure 1

MFN 06-308

Supplement 1

Response to Portion of NRC Request for

Additional Information Letter No. 51

Related to ESBWR Design Certification Application

Classification of Structures, Systems and Components

RAI Number 3.2-19 S01

Original Response previously submitted under MFN 06-308 is included to provide historical continuity during review.

NRC RAI 3.2-19

In Table 3.2-1, Component B21, Item 13, the piping and valves (including supports) for main steam drains beyond the outermost MSIV and downstream of the second isolation valve is designated Quality Group D. However, consistent with SRP 3.2.2 and RG 1.26 guidance, this second drain isolation valve must also be a normally closed valve to define an acceptable transition from the upstream Quality Group B piping to the downstream Quality Group D piping. Please verify that the described second valve is a normally closed valve. Also, this item is designated Seismic Category II, which requires seismic analysis methods which are described in Section 3.7 of the DCD. However, Section 15.4.4.5.2.3 of the DCD refers to earthquake experience data as a basis for seismic structural capability of the main steam lines and drains. Please verify that this item will be analyzed according to methods described in Section 3.7, and revise Section 15.4.4.5.2.3 accordingly.

GE Response

The second isolation valve in the main steam drains beyond the outermost MSIV is a normally closed valve. GE confirms that B21 Item 13 in Table 3.2-1 will be analyzed according to the methods that are described in DCD Section 3.7. The statement in Section 15.4.4.5.2.3 that refers to earthquake experience data is not intended to be the only basis for seismic structural capability of main steam lines and drains. Please refer to the following statement in Section 15.4.4.5.2.3 that confirms that in the case of the ESBWR a dynamic analysis is performed to provide the basis for seismic structural capability of these lines:

"In the case of the ESBWR, further margin for survival can be expected, because the ESBWR lines are designed through dynamic analysis to survive such events, whereas in the case of the actual experience database, the lines shown to survive were designed to lesser standards to meet only normally expected loads."

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

NRC RAI 3.2-19 S01

Table 3.2-1 shows that the MSIV drains beyond the outermost MSIV is designated as Quality Group D. The response to RAI 3.2-19 indicates that the second isolation valve in the main steam drains beyond the MSIV is a normally closed valve and GE confirms that B21 item 13 in Table 3.2-1 will be analyzed according to the methods that are described in DCD Section 3.7. Since Figure 3.2-1 shows there is an open orifice in this line that bypasses the closed valve, please confirm that the offsite radiation dose caused by a failure in this Safety Class D piping will not exceed the acceptance criteria of .5 rem identified in RG 1.26. Otherwise this line should be classified as Quality group C to be consistent with RG 1.26.

GE Response

There is a second normally closed valve that is in series with and upstream of the orifice in the bypass line. This valve is not reflected in the simplified schematic in DCD Figure 3.2-1, but does appear on the detailed Nuclear Boiler System P&ID. This second normally closed valve has the same classification as the normally closed valve referenced in the RAI. Therefore, no re-classification of the bypass line with the orifice is needed.

DCD Impact

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