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MFN 06-308
Supplement 11

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

Subject: **Response to Portion of NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – Design Of Structures, Components, Equipment, and Systems – RAI Number 3.2-48 S03**

The purpose of this letter is to submit a GEH initiated amended response to RAI Number 3.2-48 S02 transmitted via email on November 20, 2006. Previous RAI responses are contained in the Reference 1 through 3 letters. The GEH response to RAI Number 3.2-48 S03 is addressed in Enclosure 1.

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

Sincerely,

James C. Kinsey
Vice President, ESBWR Licensing

Doug

NRW

References:

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
2. MFN 06-308, Supplement 6, Letter from James C. Kinsey to U.S. Nuclear Regulatory Commission, *Response to Portion of NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – System Classifications – RAI Number 3.2-48 S01*, May 2, 2007
3. MFN 06-308, Supplement 7, Letter from James C. Kinsey to U.S. Nuclear Regulatory Commission, *Response to Portion of NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – System Classifications – RAI Number 3.2-48 S02*, May 22, 2007

Enclosure:

1. Response to Portion of NRC Request for Additional Information Letter No. 51 Related to ESBWR Design Certification Application – Design Of Structures, Components, Equipment, and Systems – RAI Number 3.2-48 S03

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 0000-0076-3649

MFN 06-308, Supplement 11

Enclosure 1

Response to Portion of NRC Request for

Additional Information Letter No. 51

Related to ESBWR Design Certification Application

Design Of Structures, Components, Equipment, and Systems

RAI Number 3.2-48 S03

NRC RAI 3.2-48

Table 3.2-1, Component T12: In Section 6.2.1.1.2 of the DCD, there are discussed containment vacuum breakers. Consistent with RGs 1.26 and 1.29 and SRPs 3.2.1 and 3.2.2, these components should be included in the Table as Quality Group B, Quality Assurance B, and Seismic Category I components. Please revise the Table accordingly.

GE Response

Comment accepted.

DCD, Tier 2, Table 3.2-1 will be revised by adding vacuum breakers and its instrumentation and vacuum breaker isolation valves as per the attached markup.

NRC RAI 3.2-48 S01

Email from Jim Gaslevic on 11/20/06

The response to RAI 3.2-48 clarified that DCD table 3.2-1 will be revised to include vacuum breakers. Due to this omission and other recent changes to table 3.2-1, it is not evident that table 3.2-1 has been thoroughly reviewed in comparison to design documents to assure that all components important to safety have been identified. To assure that the scope of items important to safety included in Table 3.2-1 is complete and consistent with the classification criteria contained in Section 3.2, it is requested that the applicant verify that a comprehensive review of P&IDs and other design documents has or will be performed to identify any missing items. It is also requested that the revision of the P&IDs and other design documents used for this review be identified so that the detailed version of the plant design applicable to the design certification is documented. This commitment may be linked to the resolution of item 3.2-7.

GE Response

GE has reviewed and made corrections to DCD Table 3.2-1 to assure that the system classifications are complete, consistent, and up-to-date. All safety-related systems are properly classified. DCD Table 3.2-1 is subject to change as the plant design progresses. The table below contains explanations for the DCD Table 3.2-1 changes.

Explanations for Table 3.2-1 Changes

System	Item(s)	Basis for Change
C62	1	Seismic II added for components that are mounted in close proximity to Seismic Category I components. A note has been added to clarify this item.
C62	2	Changed Seismic Category from NS to II because components are in close proximity to Seismic Category I components.
C72	--	System name changed for consistency with Chapter 7.
E50	5	Quality Group classification changed to "-" because components do not meet RG 1.26 requirements for being assigned a quality group classification (i.e., they do not contain steam or water and they do not retain pressure).
F11	1, 2	Original item was expanded into two separate items to stay consistent with Table 9.1-4.
F15	3	Item deleted. Refueling bellows transferred from F15 to T12. See RAI 16.2-77 for further details.
F21	--	Location changed from FB to RB for consistency with Table 9.1-4.
F32	--	Location changed from RB to FB for consistency with Table 9.1-4.
R10	3, 4, 5	Item names changed to be consistent with Chapter 8.
R51	--	Note added to clarify requirements for equipment mounting in safety-related areas.
T12	7	New item transferred here from System F15. See RAI 16.2-77 for further details.
T62	All	Editorial change. Replaced note with individual table entries.
U31	2	Changed from Seismic Category I to II because the crane is not responsible for any safety-related functions. However, its failure could affect safety-related systems, which qualifies it as Seismic Category II.
U43	5	Changed from Seismic Category II to I to withstand tornado loading and missiles. The fire pump enclosure protects the Seismic Category I diesel-driven fire pump and Seismic Category II motor-driven fire pump.
U43	7	Changed from Seismic Category NS to II because it is in the same enclosure as the Seismic I Category diesel-driven fire pump.

DCD Impact

DCD Tier #2, Revision 4, Table 3.2-1 will be revised as noted in the attached markup.

NRC RAI 3.2-48 S02

Email from Jim Gaslevic on 11/20/06

The response to RAI 3.2-48 clarified that DCD table 3.2-1 will be revised to include vacuum breakers. Due to this omission and other recent changes to table 3.2-1, it is not evident that table 3.2-1 has been thoroughly reviewed in comparison to design documents to assure that all components important to safety have been identified. To assure that the scope of items important to safety included in Table 3.2-1 is complete and consistent with the classification criteria contained in Section 3.2, it is requested that the applicant verify that a comprehensive review of P&IDs and other design documents has or will be performed to identify any missing items. It is also requested that the revision of the P&IDs and other design documents used for this review be identified so that the detailed version of the plant design applicable to the design certification is documented. This commitment may be linked to the resolution of item 3.2-7.

GE Amended Response

GE has reviewed and made corrections to DCD Table 3.2-1 to assure that the system classifications are complete, consistent, and up-to-date. All safety-related systems are properly classified. DCD Table 3.2-1 is subject to change as the plant design progresses. The table below contains explanations for the DCD Table 3.2-1 changes.

Subsequent to the submittal of GE's response to RAI 3.2-48 S01, it was decided in the response to RAI 16.2-77 that T10 (Containment System) was the most appropriate location for the refueling bellows. This supplement was written to amend the response to RAI 3.2-48 S01 to make it consistent with the final response to RAI 16.2-77. The location of the refueling bellows is the only change associated with this amended response.

Explanations for Table 3.2-1 Changes

System	Item(s)	Basis for Change
C62	1	Seismic II added for components that are mounted in close proximity to Seismic Category I components. A note has been added to clarify this item.
C62	2	Changed Seismic Category from NS to II because components are in close proximity to Seismic Category I components.
C72	--	System name changed for consistency with Chapter 7.
E50	5	Quality Group classification changed to "-" because components do not meet RG 1.26 requirements for being assigned a quality group classification (i.e., they do not contain steam or water and they do not retain pressure).
F11	1, 2	Original item was expanded into two separate items to stay consistent with Table 9.1-4.
F15	3	Item deleted. Refueling bellows transferred from F15 to T10 . See RAI 16.2-77 for further details.
F21	--	Location changed from FB to RB for consistency with Table 9.1-4.
F32	--	Location changed from RB to FB for consistency with Table 9.1-4.
R10	3, 4, 5	Item names changed to be consistent with Chapter 8.
R51	--	Note added to clarify requirements for equipment mounting in safety-related areas.
T10	7	New item transferred here from System F15. See RAI 16.2-77 for further details.
T62	All	Editorial change. Replaced note with individual table entries.
U31	2	Changed from Seismic Category I to II because the crane is not responsible for any safety-related functions. However, its failure could affect safety-related systems, which qualifies it as Seismic Category II.
U43	5	Changed from Seismic Category II to I to withstand tornado loading and missiles. The fire pump enclosure protects the Seismic Category I diesel-driven fire pump and Seismic Category II motor-driven fire pump.
U43	7	Changed from Seismic Category NS to II because it is in the same enclosure as the Seismic I Category diesel-driven fire pump.

DCD Impact

DCD Tier #2 Table 3.2-1 will be revised as noted in the attached markup.

NRC RAI 3.2-48 S03

Email from Jim Gaslevic on 11/20/06

The response to RAI 3.2-48 clarified that DCD table 3.2-1 will be revised to include vacuum breakers. Due to this omission and other recent changes to table 3.2-1, it is not evident that table 3.2-1 has been thoroughly reviewed in comparison to design documents to assure that all components important to safety have been identified. To assure that the scope of items important to safety included in Table 3.2-1 is complete and consistent with the classification criteria contained in Section 3.2, it is requested that the applicant verify that a comprehensive review of P&IDs and other design documents has or will be performed to identify any missing items. It is also requested that the revision of the P&IDs and other design documents used for this review be identified so that the detailed version of the plant design applicable to the design certification is documented. This commitment may be linked to the resolution of item 3.2-7.

GEH Amended Response

GEH has reviewed and made corrections to DCD Table 3.2-1 to assure that the system classifications are complete, consistent, and up-to-date. All safety-related systems are properly classified. DCD Table 3.2-1 is subject to change as the plant design progresses. The table below contains explanations for the DCD Table 3.2-1 changes.

Subsequent to the submittal of GEH's response to RAI 3.2-48 S01, it was decided in the response to RAI 16.2-77 that T10 (Containment System) was the most appropriate location for the refueling bellows. This supplement was written to amend the response to RAI 3.2-48 S02 to make it consistent with the final response to RAI 16.2-77. The location of the refueling bellows is the only change associated with this amended response.

Subsequent to the submittal of GEH's response to RAI 3.2-48 S02, two minor issues with that response were identified and corrected in DCD Rev. 4. The note that was proposed for addition to System C62 Item 1 was identified as being potentially vague by using the term "in close proximity". Consequently, an editorial change was made such that the note now reads as follows:

Components whose failure can potentially adversely affect Seismic Category I components (e.g., in main control room) are required to be Seismic Category II. Otherwise the components are non-seismic.

In addition, it was discovered that the table attached to RAI 3.2-48 S02 should have listed the item number for the new item in System T10 as item 6 instead of item 7.

Explanations for Table 3.2-1 Changes

System	Item(s)	Basis for Change
C62	1	Seismic II added for components that are mounted in close proximity to Seismic Category I components. A note has been added to clarify this item. Editorial change was made to note in final published DCD Rev 4 due to a concern having been raised over the vague nature of the phrase "in close proximity".
C62	2	Changed Seismic Category from NS to II because components are in close proximity to Seismic Category I components.
C72	--	System name changed for consistency with Chapter 7.
E50	5	Quality Group classification changed to "-" because components do not meet RG 1.26 requirements for being assigned a quality group classification (i.e., they do not contain steam or water and they do not retain pressure).
F11	1, 2	Original item was expanded into two separate items to stay consistent with Table 9.1-4.
F15	3	Item deleted. Refueling bellows transferred from F15 to T10. See RAI 16.2-77 for further details.
F21	--	Location changed from FB to RB for consistency with Table 9.1-4.
F32	--	Location changed from RB to FB for consistency with Table 9.1-4.
R10	3, 4, 5	Item names changed to be consistent with Chapter 8.
R51	--	Note added to clarify requirements for equipment mounting in safety-related areas.
T10	6	New item transferred here from System F15. See RAI 16.2-77 for further details.
T62	All	Editorial change. Replaced note with individual table entries.
U31	2	Changed from Seismic Category I to II because the crane is not responsible for any safety-related functions. However, its failure could affect safety-related systems, which qualifies it as Seismic Category II.
U43	5	Changed from Seismic Category II to I to withstand tornado loading and missiles. The fire pump enclosure protects the Seismic Category I diesel-driven fire pump and Seismic Category II motor-driven fire pump.
U43	7	Changed from Seismic Category NS to II because it is in the same enclosure as the Seismic I Category diesel-driven fire pump.

DCD Impact

DCD Tier #2 Table 3.2-1 has already been updated as indicated above in Revision 4.