

Enclosure 1

MFN 15-023 Supplement 1

GEH Response and Supplemental Response to RAI 11.04-1

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(Please note that below is GEH's original response to RAI 06.03 -1 for convenience)

NRC Request for Additional Information 11.04-1

10 CFR 52.59(a) requires, in pertinent part, a finding of compliance with the regulations in effect at the time of original certification in order to issue a renewed design certification. As required by the regulations in effect at the time the ABWR DC was originally issued, the ABWR DC application must contain "[t]he technical information which is required of applicants for construction permits and operating licenses by 10 CFR Part 20, Part 50 and its appendices, and Parts 73 and 100, and which is technically relevant to the design and not site-specific." 10 CFR 52.47(a)(1)(i) (1997). 10 CFR Part 50, Appendix A, General Design Criterion 2 (1997) required that structures, systems, and components important to safety be designed to withstand the effects of natural phenomena, with appropriate consideration of the most severe natural phenomena reported for the site and surrounding area and of the importance of the safety function to be performed. 10 CFR Part 50, Appendix A, General Design Criteria 60 (1997) required that the nuclear power unit design include means to control suitably the release of radioactive materials in gaseous and liquid effluents and to handle radioactive solid wastes. 10 CFR Part 50, Appendix A, General Design Criteria 61 (1997) required the fuel storage and handling, radioactive waste, and other systems that might contain radioactivity to be designed to assure adequate safety under normal and postulated accident conditions, including appropriate containment, confinement, and filtering systems for radioactive waste systems.

GEH ABWR DCD Tier 2, Table 1.8-20 indicates that Regulatory Guide (RG) 1.143, Revision 1, is applicable to the design of the GEH ABWR DCD. However, while DCD Sections 11.2 and 11.3 provide information and commitments which ensure that systems and components of the liquid and gaseous waste management systems are designed and tested in accordance with RG 1.143, there does not appear to be a specific commitment in the DCD to the guidance of RG 1.143 for the solid waste management system and there is insufficient information in the DCD to indicate if the systems and components of the solid waste management system, including any mobile systems that may be used (as indicated in DCD Section 11.4.2), meet the criteria in RG 1.143 (i.e. the design, testing, and quality assurance criteria). Staff notes that RG 1.143, Revision 1, Regulatory Position 3, specifies the design and testing criteria for solid waste management systems and Regulatory Position 6 provides the quality assurance criteria.

RG 1.143, Revision 1, Regulatory Position 6 provides quality assurance program criteria applicable to systems within the scope of RG 1.143, Revision 1. GEH ABWR DCD Tier 2, Table 3.2-1 provides classification and other information for SSCs. Note "p" to Table 3.2-1 indicates that "[a] quality assurance program meeting the guidance of Regulatory Guide 1.143 will be applied during design and construction." While this note applies to the appropriate principal components listed under "K1 Radwaste System," it is not listed as applying to the Offgas system ("N22 Offgas System"). Therefore, it is unclear if the quality assurance requirements specified in RG 1.143, Revision 1 apply to the offgas system.

Also, note "q" to Table 3.2-1, which states, "detailed seismic design criteria for the offgas system is provided in Subsection 11.3.4.8" is not identified as applying to any of the principal components in the table. Therefore, the principal component(s) to which note "q" applies should be identified in the table.

Also, it would appear that note "v" to Table 3.2-1, which states, "See Regulatory Guide 1.143, Paragraph C.5 for the offgas vault seismic requirements" should apply to the offgas system (principal component "N22 Offgas System" in Table 3.2-1) and it does not.

Therefore, in accordance with the above information:

- 1) Please update the DCD, as appropriate, to provide information ensuring that the solid waste management system will meet the design, testing, and quality assurance criteria in Regulatory Guide 1.143, Revision 1, or provide an alternative approach that satisfies NRC regulations.*
- 2) Please update DCD Tier 2, Table 3.2-1, as appropriate, to correct the apparent errors associated with notes p, q, and v, noted above.*

GEH Response:

GEH concurs with the proposed updates provided in your Question 11.04-1.

The following updates will be added to DCD Tier 2:

- 1) The following new sentence will be added to the end of Subsection 11.4.1.2: "This includes compliance with Regulatory Guide 1.143."
- 2) The following will be added to Table 3.2-1 for "**N22 Offgas System**" in the "**Notes**" Column: "(p), (q), (v)"

Additional issues:

During the preparation of this RAI response the following typographical errors were found in the DCD and are being corrected:

- 3) DCD Subsection 11.2.1.2.2 references Regulatory Guide "1.43". It should be Regulatory Guide "1.143" and has been corrected accordingly.
- 4) DCD Table 3.2-1, Note "q" references Subsection "11.3.4.8". There is no such subsection, it should be Subsection "11.3.8" and it has been changed accordingly.

Impact of DCD:

The DCD, Tier 2 Subsections 11.2.1.2.2 and 11.4.1.2 and Table 3.2-1 are revised as shown on the attached markups.

NRC Request for Supplemental Information:

During the public meeting on May 7, 2015 the NRC asked that GEH ensure that the statement at the end of Subsection 11.4.1.2 also applies to Testing, Quality Assurance, Seismic Design of the RWB and other aspects of RG 1.143 not just design.

GEH Response to Request for Supplemental Information:

ABWR DCD R5 Subsection 11.4.1.2 will be revised to add the following words to the end of the subsection:

“ . . ., including quality classification, construction and testing requirements in Subsection 11.2.1.2.1 and building requirements in Subsection 11.2.1.2.2.”

Impact On DCD:

The last sentence in ABWR DCD R5 Subsection 11.4.1.2 will be revised to read as follows:
“This includes compliance with RG 1.143, including quality classification, construction and testing requirements in Subsection 11.2.1.2.1 and building requirements in Subsection 11.2.1.2.2.”

The ABWR DCD R5 revised markup up page is provided in Enclosure 2.