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Subject: **Supplemental Information #2 for GEH's Response to Item # 26 - Fukushima Recommendation 4.2 Mitigation Strategies of NRC Suggested U.S. Advanced Boiling Water Reactor Design Changes**

References:

1. Letter from R.E. Kingston, GEH to USNRC, Subject: ABWR Standard Plant Design Certification Renewal Application Design Control Document, Revision 5, Tier 1 and Tier 2, December 7, 2010.
2. Letter from USNRC to Jerald G. Head, GEH, Subject: GE-Hitachi Nuclear Energy – United States Advanced Boiling-Water Reactor Design Certification Renewal Application, July 20, 2012.
3. Letter from Jerald G. Head, GEH, to USNRC, Subject: Response to NRC Letter: GE Hitachi Nuclear Energy – United States Advanced Boiling-Water Reactor Design Certification Renewal Application (July 20, 2012), September 17, 2012.
4. Letter from Jerald G. Head, GEH, to USNRC, Subject: GEH Proposed Resolution of Item # 26 - Fukushima Recommendation 4.2 Mitigation Strategies of NRC Suggested U.S. Advanced Boiling Water Reactor Design Changes, September 4, 2015
5. Letter from Jerald G. Head, GEH, to USNRC, Subject: Supplemental Information for GEH's Response to Item # 26 - Fukushima Recommendation 4.2 Mitigation Strategies of NRC Suggested U.S. Advanced Boiling Water Reactor Design Changes, April 29<sup>th</sup>, 2016

GEH submitted a Design Certification Renewal application for the U.S. Advanced Boiling Water Reactor (ABWR) in Reference 1 pursuant to the requirements of Subpart B, "Standard Design

Certifications,” of Title 10 of the Code of Federal Regulations (10 CFR) Part 52, “Licenses, Certifications, and Approvals for Nuclear Power Plants.”

In Reference 2, the NRC suggested design changes to address issues that the agency considered to be regulatory improvements or changes that could meet the 10 CFR 52.59(b) criteria. In addition, the NRC requested that GEH implement the Fukushima Near-Term Task Force recommendations contained in SECY-12-0025, “Proposed Orders and Requests for Information in Response to Lessons Learned from Japan’s March 11, 2011, Great Tohoku Earthquake and Tsunami,” dated February 17, 2012. Collectively, these items are termed the “28-item backfit list”.

In Reference 3, GEH responded to Reference 2 and committed to address the “28-item backfit list”.

In public and private meetings the NRC held with GEH on May 7<sup>th</sup>, 2015, GEH reviewed the closure plan for the “28-item backfit list” for those items that GEH would not receive any additional Requests for Additional Information. During that meeting, Item #26 of the “28-item backfit list” was discussed and GEH’s approach was revised taking into consideration the staff’s feedback.

Reference 4 transmitted GEH’s proposed resolution to Item #26 of the “28-item backfit list” transmitted in Reference 2.

In a public teleconference with the NRC on March 17, 2016, the NRC Staff requested that GEH provide a clear picture of the ABWR response to a Beyond Design Basis Event (BDBE) with specific information items to be provided by the Combined Operating License (COL) Applicant. Reference 5 transmitted a proposed new Appendix 1D to the ABWR DCD that addresses the ABWR response to a Beyond Design Basis Event (BDBE).

In a teleconference discussion of Reference 5 with the NRC on July 19, 2016, the NRC Staff requested that GEH provide the overall approach for mitigating strategies for the ABWR response to a Beyond Design Basis Event (BDBE). The NRC requested that GEH describe how a licensee of an ABWR plant would use certain design features that are onsite, and what features are available when the plant transitions to using the equipment that could be brought in from offsite to maintain the plant in a safe condition.

Enclosure 1 contains GEH’s proposed additions to Appendix 1D of Reference 5 to address the NRC staff’s concerns. Enclosure 2 contains the Design Control Document markups associated with just GEH’s supplemental information response number 2.

If you have any questions concerning this letter, please contact Hugh Upton at 408-314-8499.

Sincerely,

A handwritten signature in black ink that reads "Jerald G. Head". The signature is written in a cursive, flowing style.

Jerald G. Head  
Senior Vice President, Regulatory Affairs

Commitments: No additional commitments are made in this response.

Enclosures:

1. GEH Response to NRC's Request for Supplemental Information # 2 to Item #26 – Fukushima Recommendation 4.2 - Mitigation Strategies
2. GEH's Response to NRC's Request for Supplemental Information # 2 to Item #26 – Fukushima Recommendation 4.2 - Mitigation Strategies - ABWR DCD Revision 6 Markups

cc: Adrian Muniz, NRC  
DBR – 0012411