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MFN 10-068

Docket No. 52-010

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

Subject: **Submittal of Changes to Chapter 1 of DCD Tier 2 Related to Revision of References**

The purpose of this letter is to submit markups to Chapter 1 of the ESBWR DCD, Tier 2, which are the result of revisions to documents referenced within Chapter 18. In addition, a change to Chapter 1 is included as a result of the addition of Reference (1) to DCD Chapter 7 that had not been previously recorded in DCD Chapter 1 Table 1.6-1 (Referenced GE/GEH Reports).

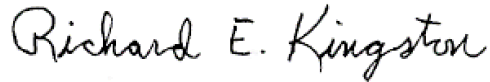
Chapter 1 compiles the Chapter 18 references in Table 1.6-1. Enclosure 1 includes the DCD markups to Chapter 1 depicting the updates to the references as a result of revisions to the LTRs submitted in References 1 through 13.

Reference (1) was added to Chapter 7 in the RAI response submitted in Reference (14). The corresponding Section Number of this reference within Chapter 7 is added to Table 1.6-1 in the markups included in Enclosure 1.

These markups will be incorporated into the DCD, Revision 7. Changes associated with the updated references and the added section number in Table 1.6-1 are enclosed within boxes on the markup pages.

If you have any questions about the information provided, please contact me.

Sincerely,

A handwritten signature in cursive script that reads "Richard E. Kingston".

Richard E. Kingston
Vice President, ESBWR Licensing

References:

1. MFN 10-029 - Submittal of Licensing Topical Report NEDE-33217P, "ESBWR Man-Machine Interface System and Human Factors Engineering Implementation Plan," Revision 6, dated February 5, 2010
2. MFN 10-019 - Submittal of Licensing Topical Report NEDO-33278, "ESBWR Human Factors Engineering Design Implementation Plan," Revision 4, dated January 25, 2010
3. MFN 10-020 - Submittal of Licensing Topical Report NEDO-33277, "ESBWR Human Factors Engineering Human Performance Monitoring Implementation Plan", Revision 4, dated January 25, 2010
4. MFN 10-021 - Submittal of Licensing Topical Report NEDO-33275, "ESBWR Human Factors Engineering Training Development Implementation Plan," Revision 4, dated January 29, 2010
5. MFN 10-022 - Submittal of Licensing Topical Report NEDO-33267, "ESBWR Human Factors Engineering Human Reliability Analysis Implementation Plan," Revision 4, dated January 29, 2010
6. MFN 10-023 - Submittal of Licensing Topical Report NEDO-33266, "ESBWR Human Factors Engineering Staffing and Qualifications Implementation Plan," Revision 3, dated February 1, 2010
7. MFN 10-024 - Submittal of Licensing Topical Report NEDO-33262, "ESBWR Human Factors Engineering Operating Experience Review Implementation Plan," Revision 3, dated February 2, 2010
8. MFN 10-026 - Submittal of Licensing Topical Report NEDO-33219, "ESBWR Human Factors Engineering Functional Requirements Analysis Implementation Plan," Revision 4, dated February 3, 2010
9. MFN 10-028 - Submittal of Licensing Topical Report NEDO-33274, "ESBWR Human Factors Engineering Procedures Development Implementation Plan," Revision 5, dated February 11, 2010

10. MFN 10-030 - Submittal of Licensing Topical Report NEDE-33220P, "ESBWR Human Factors Engineering Allocation of Function Implementation Plan," Revision 4 – GEH Proprietary Information, dated February 8, 2010
11. MFN 10-031 - Submittal of Licensing Topical Report NEDE-33221P, "ESBWR Human Factors Engineering Task Analysis Implementation Plan," Revision 4 – GEH Proprietary Information, dated February 9, 2010
12. MFN 10-032 - Submittal of Licensing Topical Report NEDE-33268P, "ESBWR Human Factors Engineering Human-System Interface Design Implementation Plan," Revision 5 – GEH Proprietary Information, dated February 10, 2010
13. MFN 10-033 - Submittal of Licensing Topical Report NEDE-33276P, "ESBWR Human Factors Engineering Verification and Validation Implementation Plan," Revision 4 – GEH Proprietary Information, dated February 11, 2010
14. MFN 09-803 - Response to NRC Request for Additional Information Letter No. 403 Related to ESBWR Design Certification Application – RAI 7.1-142, dated January 12, 2010

Enclosure:

1. MFN 10-068 - Submittal of Changes to Chapter 1 of DCD Tier 2 Related to Revision of References – DCD Markups

| | |
|----------------|------------------------------------|
| cc: AE Cabbage | USNRC (with enclosures) |
| J G Head | GEH/Wilmington (with enclosures) |
| DH Hinds | GEH/Wilmington (with enclosures) |
| DF Taylor | GEH/Wilmington (with enclosures) |
| eDRF Section | 0000-0114-0899 (DCD Markups) |
| | 0000-0048-2821 R6 (NEDE-33217P R6) |
| | 0000-0052-9521 R5 (NEDO-33278 R4) |
| | 0000-0052-9520 R6 (NEDO-33277 R4) |
| | 0000-0052-9519 R6 (NEDO-33275 R4) |
| | 0000-0051-1682 R5 (NEDO-33267 R4) |
| | 0000-0050-9818 R6 (NEDO-33266 R3) |
| | 0000-0049-8918 R4 (NEDO-33262 R3) |
| | 0000-0050-0877 R6 (NEDO-33219 R4) |
| | 0000-0052-9516 R6 (NEDO-33274 R5) |
| | 0000-0049-8915 R5 (NEDE-33220P R4) |
| | 0000-0049-8992 R7 (NEDE-33221P R4) |
| | 0000-0051-1678 R6 (NEDE-33268P R5) |
| | 0000-0051-3917 R5 (NEDE-33276P R4) |
| | 0000-0111-2789 (RAI 7.1-142) |

MFN 10-068

Enclosure 1

Submittal of Changes to Chapter 1 of DCD Tier 2

Related to Revision of References

DCD Markups

Table 1.6-1
Referenced GE / GEH Reports

| Report No. | Title | Section No. |
|---|--|--|
| NEDE-33083P-A Supplement 1 NEDO-33083-A Supplement 1 | GE Hitachi Nuclear Energy, B.S. Shiralkar, et al, "TRACG Application for ESBWR Stability Analysis," NEDE-33083P-A, Supplement 1, Revision 1, Class III (Proprietary), January 2008 and NEDO-33083-A, Supplement 1, Revision 1, Class I (Non-proprietary), January 2008. | 1.1, 1.5, 1.9, 4.3, 4D |
| NEDE-33083P Supplement 2 NEDO-33083 Supplement 2 | GE Hitachi Nuclear Energy, "TRACG Application for ESBWR Anticipated Transient Without Scram Analyses," NEDE-33083P, Supplement 2, Revision 1, Class III (Proprietary), February 2008 and NEDO-33083, Supplement 2, Revision 1, Class 1 (Non-proprietary), February 2008. | 1.5, 15.5 |
| NEDE-33083P, Supplement 3 NEDO-33083 Supplement 3 | GE Hitachi Nuclear Energy, "TRACG Application for ESBWR Transient Analysis," NEDE-33083P, Supplement 3, Class III (Proprietary), and NEDO-33083, Supplement 3, Class 1 (Non-proprietary), December 2007. | 1.5, 15.2, 15.3, 15.5 Chapter 16 Sect. 5.6.3 |
| NEDC-33139P-A | Global Nuclear Fuel, "Cladding Creep Collapse," NEDC-33139P-A, Class III (Proprietary), July 2005. | 4.2 |
| NEDO-33181 | GE Hitachi Nuclear Energy, "NP-2010 COL Demonstration Project Quality Assurance Program," NEDO-33181, Revision 6, August 2009. | 17.0, 17.1, 17.4 |
| NEDE-33197P NEDO-33197 | GE Hitachi Nuclear Energy, "Gamma Thermometer System for LPRM Calibration and Power Shape Monitoring," NEDE-33197P, Class III (Proprietary), and NEDO-33197, (Non-proprietary), Revision 2, August 2008. | 7.7, 14.2 |
| NEDE-33217P NEDO-33217 | <i>[GE Hitachi Nuclear Energy, "ESBWR Man-Machine Interface System and Human Factors Engineering Implementation Plan," NEDE-33217P, Class III (Proprietary) and NEDO-33217, Class I (Non-proprietary), Revision 65, April/February 2010]*.</i> | 4D, 7B, 13.3, 13.5, 18.1 through 18.13 |

Table 1.6-1
Referenced GE / GEH Reports

| Report No. | Title | Section No. |
|---------------------------|--|---|
| NEDO-33219 | [GE Hitachi Nuclear Energy, “ESBWR Human Factors Engineering Functional Requirements Analysis Implementation Plan,” NEDO-33219, Class I (Non-proprietary), Revision 34 , April <u>February</u> 20 <u>10</u> 9.]* | 18.4 |
| NEDE-33220P NEDO-33220 | [GE Hitachi Nuclear Energy, “ESBWR Human Factors Engineering Allocation of Function Implementation Plan,” NEDE-33220P, Class III (Proprietary), and NEDO-33220, Class I (Non-proprietary), <u>Revision 34, May</u> <u>February</u> 20 <u>10</u> 9.]* | 18.4 |
| NEDE-33221P NEDO-33221 | [GE Hitachi Nuclear Energy, “ESBWR Human Factors Engineering Task Analysis Implementation Plan,” NEDE-33221P, Class <u>III</u> (Proprietary), and NEDO-33221, Class I (Non-proprietary), Revision 43 , June <u>February</u> 20 <u>10</u> 9.]* | 18.5 |
| NEDE-33226P NEDO-33226 | [GE Hitachi Nuclear Energy, “ESBWR – Software Management Program Manual,” NEDE-33226P, Class III (Proprietary), Revision 4, May 2009 <u>Revision 5, February 2010</u> , and NEDO-33226, Class I (Non-proprietary), Revision 4, May 2009 <u>Revision 5, February 2010</u> .]* | 7.1, 7.2, 7.3, 7B |
| NEDC-33237P NEDO-33237 | [Global Nuclear Fuel, “GE14 for ESBWR – Critical Power Correlation, Uncertainty, and OLMCPR Development,” NEDC-33237P, Class III (Proprietary), and NEDO-33237, Class I (Non-proprietary), Revision 4, July 2008.]* | 4.4, Chapter 16 B2.1.1, B3.2.2 |
| NEDC-33238P NEDO-33238 | Global Nuclear Fuel, “GE14 Pressure Drop Characteristics”, NEDC-33238P, Class III (Proprietary), and NEDO-33238, Class I (Non-proprietary), December 2005. | 4.4 |

Table 1.6-1
Referenced GE / GEH Reports

| Report No. | Title | Section No. |
|---------------------------|--|--------------------|
| NEDE-33259P NEDO-33259 | GE Hitachi Nuclear Energy, "Reactor Internals Flow Induced Vibration Program," NEDE-33259P, Class III (Proprietary), Revision 2, June 2009, and NEDO-33259, Class I (Non-proprietary), Revision 2, June 2009. | 3L |
| NEDO-33260 | GE Hitachi Nuclear Energy, "Quality Assurance Requirements for Suppliers of Equipment and Services to the GEH ESBWR Project," NEDO-33260, Revision 5, April 2008. | 17.0 |
| NEDE-33261P NEDO-33261 | <i>[GE Hitachi Nuclear Energy, "ESBWR Containment Load Definition," NEDE-33261P, Class III (Proprietary) and NEDO-33261, Class I (Non-proprietary), Revision 2, June 2008.]*</i> | 3.8, 3B |
| NEDO-33262 | <i>[GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Operating Experience Review Implementation Plan," NEDO-33262, Class I (Non-proprietary), <u>Revision 32, May-January 20108.</u>]*</i> | 18.3 |
| NEDO-33266 | <i>[GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Staffing and Qualifications Implementation Plan," NEDO-33266, Class I (Non-proprietary), <u>Revision 23, May-January 20108.</u>]*</i> | 18.6 |
| NEDO-33267 | <i>[GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Human Reliability Analysis Implementation Plan," NEDO-33267, Class I (Non-proprietary), <u>Revision 43, May-January 20108.</u>]*</i> | 18.7 |
| NEDE-33268P NEDO-33268 | <i>[GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Human-System Interface Design Implementation Plan," NEDE-33268P, Class III (Proprietary), and NEDO-33268, Class I (Non-proprietary), <u>Revision 45, May-February 20109.</u>]*</i> | 18.8 |
| NEDO-33274 | <i>[GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Procedures Development Implementation Plan," NEDO-33274, Class I (Non-proprietary), <u>Revision 35, July-February 20109.</u>]*</i> | 18.9 |

Table 1.6-1
Referenced GE / GEH Reports

| Report No. | Title | Section No. |
|---------------------------|---|--------------------|
| NEDO-33275 | [GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Training Development Implementation Plan," NEDO-33275, Class I (Non-proprietary), Revision 34, May-January 20109.]* | 18.10 |
| NEDE-33276P NEDO-33276 | [GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Verification and Validation Implementation Plan," NEDE-33276P, Class III (Proprietary), and NEDO-33276, Class I (Non-proprietary), Revision 34, July-February 20109.]* | 18.11 |
| NEDO-33277 | [GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Human Performance Monitoring Implementation Plan," NEDO-33277, Class I (Non-proprietary), Revision 34, May-January 20108.]* | 18.13 |
| NEDO-33278 | [GE Hitachi Nuclear Energy, "ESBWR Human Factors Engineering Design Implementation Plan," NEDO-33278, Class I (Non-proprietary), Revision 34, May-January 20108.]* | 18.12 |
| NEDE-33279P NEDO-33279 | GE Hitachi Nuclear Energy, "ESBWR Containment Fission Product Removal Evaluation Model," NEDE-33279P, Class III (Proprietary), and NEDO-33279, Class I (Non-proprietary), Revision 3, June 2009. | 15.4, 15C |
| (Deleted) | | |
| NEDO-33289 | GE Hitachi Nuclear Energy, "ESBWR Reliability Assurance Program," NEDO-33289, Class I (Non-proprietary), Revision 2, September 2008. | 17.4 |
| NEDE-33295P NEDO-33295 | GE Hitachi Nuclear Energy, "ESBWR Cyber Security Program Plan," NEDE-33295P, Class III (Proprietary), Revision 1, July 2009, and NEDO-33295, Class I (Non-proprietary), Revision 1, July 2009.]* | 7.1, 7B |