

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
1.	Entire Chapter	Global chapter editorial changes to correct misspelling and grammar, spell out or integrate acronyms where appropriate.
2.	S1.1.1, DQD and EQD definitions	Added definitions for “Environmental Qualification Documentation” and “Dynamic Qualification Documentation” based on RAI 14.3-449 S02 associated changes to Section 3.8. This definition is based on information in Tier 2, Sections 3.10 and 3.11, which discusses documentation for EQ testing and analyses for dynamic and environmental qualification.
3.	S1.1.1, Equipment Qualification - Environmental Qualification	Revised to read: " Electromagnetic Interference (EMI) and Radio Frequency Interference (RFI) susceptibility and emissions qualification is performed by type testing for the safety-related digital instrumentation and control equipment " in response to RAI 3.11-40
4.	S1.1.1, Equipment Qualification - Environmental Qualification	Made 3 <sup>rd</sup> sent. of the 4 <sup>th</sup> para. a new para. in response to RAI 3.11-40
5.	S1.1.1, Equipment Qualification - Environmental Qualification	Revised to read: "ITAAC are located in Section 3.8. to cover environmental qualification of digital instrumentation and control equipment located in a mild environment." in response to RAI 3.11-40
6.	S1.1.1, Equipment Qualification - Environmental Qualification	Revised to read: " Environmental qualification of electrical (including digital I&C) and mechanical equipment located in a harsh environment is covered in Section 3.8 ITAAC." in response to RAI 3.11-40
7.	S1.1.1, Equipment Qualification - Environmental Qualification	Modified the definition of “Equipment Qualification” to reflect associated changes in Section 3.8 based on RAI 14.3-449 S02. This definition is based on information in Tier 2, Section 3.11.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
8.	Various Subsections in Section 2	<p>For the following subsections, the functional arrangement ITAAC and associated Design Description Items are changed based on 14.3-449 S02 (for consistency) to reflect that the functional arrangement includes the system description in the Design Description:</p> <p>Subsection 2.2.1 and ITAAC #1.            Subsection 2.2.2 and ITAAC #1.            Subsection 2.2.3 and ITAAC #1.            Subsection 2.2.4 and ITAAC #1.            Subsection 2.2.5 and ITAAC #1.            Subsection 2.2.7 and ITAAC #1.            Subsection 2.2.9 and ITAAC #1.            Subsection 2.2.13 and ITAAC #1.            Subsection 2.2.14 and ITAAC #1.            Subsection 2.2.16 and ITAAC #1.            Subsection 2.3.2 and ITAAC #1.            Subsection 2.4.2 and ITAAC #1.</p>
9.	Various Subsections in Section 2	<p>Statements of references to Section 3.8 in system-based sections are revised to clarify that the electrical and mechanical equipment environmental qualification is addressed in Section 3.8 and the environmental and seismic qualification for digital I&amp;C equipment is addressed in Section 3.8. This change is based on RAI 14.3-449 S02 and is a consistency change.</p>
10.	S2.1.1, Design Description #8	<p>RAI 14.3-449 S02 Revision            Changed Item 8 to 8a. and added 8b.:            “8b. The RPV internal structures listed in Table 2.1.1-1 (chimney and partitions, chimney head and steam separators assembly, and steam dryer assembly) meet the requirements of ASME B&amp;PV Code, Subsection NG-3000, except for the weld quality and fatigue factors for secondary structural non-load bearing welds.”</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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11.	T2.1.1-1	<p>RAI 14.3-449 S02 Revision                      Added footnote (4) to last three rows of table and added the following footnote to the table:                      “(4) The chimney and partitions, the chimney head and steam separators assembly, and the steam dryer assembly are not ASME B&amp;PV Code components, but their design complies with the requirements of ASME B&amp;PV Code, Subsection NG-3000 except for the weld quality and fatigue factors for secondary structural non-load bearing welds.”</p>
12.	T2.1.1-3, ITAAC #3a3	<p>Changed “N-5 Data report” to “N-1/N-1A Data report” in response to RAI 14.3-456.</p>
13.	T2.1.1-3, ITAAC #8	<p>RAI 14.3-449 S02 Revision                      Changed ITAAC 8 to 8a. and added ITAAC 8b. as follows:                      DC Column: “8b. The RPV internal structures listed in Table 2.1.1-1 (chimney and partitions, chimney head and steam separators assembly, and steam dryer assembly) meet the requirements of ASME B&amp;PV Code, Subsection NG-3000, except for the weld quality and fatigue factors for secondary structural non-load bearing welds.”                      ITA Column: “Inspections will be conducted of the as-built internal structures as documented in the ASME Code design reports.”                      AC Column: “The RPV internal structures listed in Table 2.1.1-1 (chimney and partitions, chimney head and steam separators assembly, and steam dryer assembly) meet the requirements of ASME B&amp;PV Code, Subsection NG-3000, except for the weld quality and fatigue factors for secondary structural non-load bearing welds.”</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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14.	S2.1.2, Design Description #36	Revised to address the specific loads in response to Aug25 NRC staff audit response item 4. (MFN-09-621)
15.	T2.1.2-3, ITAAC #36	Revised to address the specific loads in response to Aug25 NRC staff audit response item 4. (MFN-09-621)
16.	S2.2.2, Design Description, Item #17	Added “signal to close” based on RAI 14.3-449 S02 as a clarifying consistency change.
17.	S2.2.2, Design Description, Item #18	Added “signal to open” based on RAI 14.3-449 S02 as a clarifying consistency change.
18.	T2.2.2-7, ITAAC #5iii	Corrected table numbers in AC column based on RAI 14.3-449 S02 as a clarifying consistency change.
19.	T2.2.2-7, ITAAC #17	Added “signal to close” to both DC and AC columns based on RAI 14.3-449 S02 as a clarifying consistency change.
20.	T2.2.2-7, ITAAC #18	Added “signal to open” to both DC and AC columns based on RAI 14.3-449 S02 as a clarifying consistency change.
21.	T2.2.14-4, ITAAC #11	Modified ITA and AC to define the fire protection separation criteria to match the DC by reflecting that the cabinets are in separate fire areas. See RAI 14.3-449 S02.
22.	S2.3.1, Design Description #2b	Based on RAI 14.3-449 S02, Item 2b is revised to reflect that the PRMS subsystems are physically separated for electrical divisional separation.
23.	T2.3.1-2, ITAAC #2b	Based on RAI 14.3-449 S02, ITAAC 2b is revised to reflect that the PRMS subsystems are physically separated for electrical divisional separation and for consistency with the acceptance criteria.
24.	S2.4.1, Design Description #8	Item #8 is deleted because it relates to indications and controls that will be addressed by the HFE process in Section 3.3. See RAI 14.3-449 S02. This is a consistency item.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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25.	T2.4.1-2	For valves V-14 A and B, changed “(squib)” to “(pneumatic)” for consistency with Table 2.4.1-1 designation for these valves. This change was provided to the NRC in MFN-10-059.
26.	T 2.4.1-3, Items 2a1 and 2b1	Added “hydrogen combustion” in response to RAI 6.2-202.
27.	T2.4.1-3, ITAAC #5iii ITA and AC	Added “, including the hydrodynamic effects of surrounding water for submerged components”. RAI 3.9-247 S01
28.	T2.4.1-3, ITAAC #8	ITAAC #8 is deleted because it relates to indications and controls that will be addressed by the HFE process in Section 3.3. See RAI 14.3-449 S02. This is a consistency item.
29.	T2.4.1-3, ITAAC #24i	Acceptance Criteria column is modified by deleting “two-series,” as a modifier for the valves. This change is for consistency with Figure 2.4.1-2, which shows that the valves are not in series. This change was provided to the NRC in MFN-10-059.
30.	T2.4.1-3, ITAAC #25	Removed “of the documentation” and added “test, type test, and analysis” to the ITA column based on RAI 14.3-449 S02 as a clarifying consistency change.
31.	F2.4.1-1	Added “Inline Vessel” label to component in figure in Response to RAI 14.3-455.
32.	S2.4.2, Design Description #11	Item #11 is deleted because it relates to indications and controls that will be addressed by the HFE process in Section 3.3. See RAI 14.3-449 S02. This is a consistency item.
33.	S2.4.2, Design Description #29a	Item 29a is deleted based on RAI 14.3-449 S02 and discussion with NRC staff.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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34.	T2.4.2-3, ITAAC #11	ITAAC #11 is deleted because it relates to indications and controls that will be addressed by the HFE process in Section 3.3. See RAI 14.3-449 S02. This is a consistency item.
35.	T2.4.2-3, ITAAC #29a	This ITAAC has been deleted based on RAI 14.3-449 S02 and discussion with NRC staff.
36.	T2.4.2-3, ITAAC #29d	In the AC column, deleted “sufficiently” and added “according to analyzed value” based on RAI 14.3-449 S02. This change was also discussed with NRC staff. The actual value is proprietary, but was reviewed by the NRC as part of design certification reviews.
37.	T2.5.5-1, ITAAC #9	<p>Based on RAI 14.3-449 S02, the following changes are made in the ITA column:</p> <p>Deleted: “Inspection of the as-built RB refueling machine hoist (the mast and fuel grapple) design documents will be performed for completion of the following inspections and tests:”</p> <p>Replaced with: “The following tests, type tests, and inspections will be performed:”</p> <p>This is considered a clarifying consistency change so that the wording of the ITAAC does not refer simply to the documents, but refers to the testing and inspection directly.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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38.	T2.5.5-1, ITAAC #10	<p>Based on RAI 14.3-449 S02, the following changes are made in the ITA column:</p> <p>Deleted: “Inspection of the FB fuel handling machine hoist (the mast and fuel grapple) design documents will be performed for completion of the following inspections and tests:”</p> <p>Replaced with: “The following tests, type tests, and inspections will be performed:”</p> <p>This is considered a clarifying consistency change so that the wording of the ITAAC does not refer simply to the documents, but refers to the testing and inspection directly.</p>
39.	S2.5.6, Design Descriptions #7 and #8	Added items 7 and 8 under Design Description in response to RAI 14.3-457.
40.	T2.5.6-1, ITAAC #7 and #8	Added ITAAC 7 and 8 in response to RAI 14.3-457.
41.	Figure 2.6.1-1	<p>Corrected Quality Group and Seismic Classification boundary definitions at the following locations:</p> <ul style="list-style-type: none"> <li>• FAPCS suppression pool suction for post-accident shutdown cooling</li> <li>• Supply to FAPCS containment cooling line for post-accident shutdown cooling</li> <li>• FAPCS reactor well supply to Train B, FAPCS side only</li> </ul> <p>Corrected Quality Group, Seismic Classification and building boundary definitions at the following locations:</p> <ul style="list-style-type: none"> <li>• Overboarding line to main condenser</li> <li>• Overboarding line to radwaste</li> </ul> <p>The legend was revised as necessary to support these changes. (Reference MFN 10-041, Supplement 1)</p>
42.	S2.6.2, Design Description #9	Added “safety-related” and “buffer pool”. RAI 9.1-131

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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43.	S2.6.2, Design Description #14	Changed “the water inventory above TAF” to “a water inventory above TAF sufficient for safe shielding”. RAI 9.1-130
44.	S2.6.2, Design Description #14	Added “enter the pool above the normal water level” for RAI 14.3-442 revised response.
45.	S2.6.2, Design Description #15	<p>In response to RAI 14.3-449 S02, in Item 15, changed “All” to “For all” and “are designed to” to “the ultimate rupture strength can” to reflect that this is an inspection of as-built components and to clarify the requirements for withstanding reactor system pressure.</p> <p>This is considered a clarifying consistency change.</p>
46.	S2.6.2, Design Description #16 and #17	<p>In response to RAI 14.3-449 S02, Item 16 is split out into two separate items, with Item 17 being added. Item 16 applies to electrical independence testing and Item 17 applies to physical separation. These changes relate back to RAI 14.3-443 S01, which noted, as an example, that DCD Tier 2 Section 9A.4.1 identifies that FAPCS has redundant nonsafety-related pumps that are powered from separate diesel generator backed electrical load groups for the nonsafety-related functions. Startup testing described in DCD Tier 2 Section 14.2.8.1.14 1 identifies that there is proper redundancy and electrical independence of the safety-related FAPCS controls and instrumentation that comes from Q-DCIS.</p>
47.	S2.6.2, Design Description #18a	<p>RAI 14.3-449 S02 Revision (related to RAI 9.1-133)</p> <p>Added "18a. The electrical equipment supporting the two FAPCS trains is routed to the Reactor Building and Fuel Building through separate areas that do not contain installed equipment for lifting heavy loads."</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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48.	S2.6.2, Design Description #18b	RAI 14.3-449 S02 Revision (related to RAI 9.1-133) Added "18b. Heavy loads that are being transported in the Reactor Building or the Fuel Building (where the majority of FAPCS equipment is located) that have the potential to simultaneously compromise both FAPCS trains will be handled by single failure-proof cranes."
49.	T2.6.2-2, ITAAC #7c	RAI 14.3-449 S02 Revision ITA Column: Deleted "and flow capacity."
50.	T2.6.2-2, ITAAC #9	Added "safety-related" and "buffer pool". RAI 9.1-131
51.	T2.6.2-2, ITAAC #9	Added "buffer pool" in two places. RAI 9.1-131
52.	T2.6.2-2, ITAAC #9	RAI 14.3-449 S02 Revision ITA Column: Added "and tests" for consistency, AC Column: Added to two bullets "within +/- 300 mm (1 ft)" for the tolerance of the level instruments.
53.	T2.6.2-2, ITAAC #14	Changed "the water inventory above TAF" to "a water inventory above TAF sufficient for safe shielding". RAI 9.1-130
54.	T2.6.2-2, ITAAC #14	Added "to a minimum of 3.05 m (10.0 ft)". RAI 9.1-130
55.	T2.6.2-2, ITAAC #14	Revised to include inspection to ensure that pipes enter the pool above the normal water level as described in RAI 14.3-442 revised response.

ESBWR DCD Tier 1

26A6641AB Revision 6 to Revision 7 Change List

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56.	T2.6.2-2, ITAAC #15	<p>In response to RAI 14.3-449 S02, the following changes are made:</p> <p>In the DC column, changed “are designed to” to “the ultimate rupture strength can” to reflect that this is an inspection of as-built components and to clarify the requirements for withstanding reactor system pressure.</p> <p>In the ITA column, changed “Inspection” to “Inspection and analysis to verify the ultimate rupture strength” to clarify that inspection and analysis will be performed to demonstrate ultimate rupture strength. Note that any ASME requirements for the subject components are covered in separate ITAAC.</p> <p>In the AC column, changed “The” to “For the” and “are designed to” to “the ultimate rupture strength can” to reflect that this is an inspection of as-built components and to clarify the requirements for withstanding reactor system pressure.</p> <p>This is considered a clarifying consistency change.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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57.	T2.6.2-2, ITAAC #16 and 17	<p>In response to RAI 14.3-449 S02, ITAAC 16 is split out into two separate items, with ITAAC 17 being added. ITAAC 16 applies to electrical independence testing and ITAAC 17 applies to physical separation inspection. Separation criteria are added to the AC column for ITAAC 17. These changes relate back to RAI 14.3-443 S01.</p> <p>The change in the AC column for ITAAC 17 reflects that the physical separation for the cables will be in accordance with the acceptance criteria for physical separation of electrical equipment and cables as described in IEEE-384, as discussed in Tier 2, Section 8.3.1.1.5 (which applies to safety-related electrical equipment), but which is conservatively applied here for nonsafety-related cables.</p> <p>As discussed in response to RAI 14.3-443 S01, DCD Tier 2 Section 9A.4.1 identifies that FAPCS has redundant nonsafety-related pumps that are powered from separate diesel generator backed electrical load groups for the nonsafety-related functions. The power cables to these pump motors and the associated instrumentation cables are routed via train A and train B raceways in the Electric Building and then to the Reactor building in the seismic Category II raceway tunnels. The Electrical Building is a nonsafety-related structure but the train A and B raceways are routed in separate fire zones to the tunnel access. The Reactor building cabling, safety-related and nonsafety-related, is routed using a program that is Appendix B audited, approved, and Part 21 reportable for both physical/electrical and fire separation (reference RAI 9.5-92 MFN 08-761). The same cable routing program is also used for the balance of the nonsafety-related plant to maintain physical and electrical separation and fire separation as required.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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58.	T2.6.2-2, ITAAC #18a	<p>RAI 14.3-449 S02 Revision (related to RAI 9.1-133)                      Added a new ITAAC                      DC Column: The electrical equipment supporting the two FAPCS trains is routed to the Reactor Building and Fuel Building through separate areas that do not contain installed equipment for lifting heavy loads.                      ITA Column: Inspection of the electrical equipment supporting FAPCS will be conducted.                      AC Column: The electrical equipment supporting the two FAPCS trains is routed to the Reactor Building and Fuel Building through separate areas that do not contain installed equipment for lifting heavy loads.</p>
59.	T2.6.2-2, ITAAC #18b	<p>RAI 14.3-449 S02 Revision (related to RAI 9.1-133)                      Added a new ITAAC                      DC Column: Heavy loads that are being transported in the Reactor Building or the Fuel Building (where the majority of FAPCS equipment is located) that have the potential to simultaneously compromise both FAPCS trains will be handled by single failure-proof cranes.                      ITA Column: Inspection of the Reactor Building and Fuel Building cranes will be conducted.                      AC Column: The Reactor Building and the Fuel Building cranes are single failure-proof cranes (see Table 2.16.1-1, ITAAC 10 and ITAAC 11).</p>
60.	F2.6.2-1	<p>Revised arrangement of relief valve on LPCI piping so that it is now located upstream of the motor-operated valves. RAI 9.1-138</p>
61.	T2.16.2-4, ITAAC #4	<p>ITAAC updated in response to RAI 6.4-24 S01</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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62.	S2.11.1	Added DCD Tier 1 Figures 1.11.1-1, -2, and -3 to show the layout of turbine valves important to overspeed protection and added Design Description item #12 per RAI 10.2-18 S03 part B12.
63.	S2.11.1, Design Description	<p>In response to RAI 14.3-449 S02, the following is added to clarify the scope of Quality Group B/ASME Code portions of the TMSS:</p> <p>“The Regulatory Guide 1.26 Quality Group B portions of the TMSS are those portions of the Main Steam Lines that extend from the seismic interface restraint (or seismic guide) to the turbine stop valves (non-inclusive), turbine bypass valves (non-inclusive) and the connecting branch lines (nominal 6.35 cm. (2.5 in) and larger) up to and including the first isolation valve which is either normally closed or capable of automatic closure during all modes of normal reactor operation. This defines the portions of the TMSS subject to ASME Code Section III Class 2 requirements. . Figure 2.11.1-1 shows the functional arrangement and class changes to identify the scope equipment within the TMSS.”</p>
64.	S2.11.1, Design Description #2b1	<p>In response to RAI 14.3-449 S02, the following consistency change is made:</p> <p>In Item 2b1, “identified in Table 2.11.1-1” is deleted for consistency with the associated ITAAC DC column.</p>
65.	S2.11.1, Design Description #6	<p>In response to RAI 14.3-449 S02, the following consistency change is made:</p> <p>In Item 6, changed “non-seismically designed” to “non-seismic” to reflect that this is associated with as-built components and piping. Also, added “as shown in Figure 2.11.1-1.”</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

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66.	S2.11.1, Design Description #1	Based on 14.3-449 S02, Item #1 is modified to refer to new Figure 2.11.1-1 for the functional arrangement of the TMSS layout: “and as shown on Figure 2.11.1-1.”
67.	T2.11.1-1, ITAAC #1	Based on 14.3-449 S02, ITAAC #1 is modified to refer to new Figure 2.11.1-1 for the functional arrangement of the TMSS layout: “and as shown on Figure 2.11.1-1.” This is added to both the DC and AC columns.
68.	T2.11.1-1, ITAAC #6	<p>In response to RAI 14.3-449 S02, the following consistency changes are made:</p> <p>In the DC column, changed “non-seismically designed” to “non-seismic” to reflect that this is associated with as-built components and piping, and added “as shown on Figure 2.11.1-1.”</p> <p>In the ITA column, added “and analysis” and changed “non-seismically designed” to “non-seismic” and added “The as-built non-seismic systems, structures, and components will be reconciled through inspection and analysis with the results of the initial inspection and analysis.” These changes reflect that there is an initial inspection and analysis, followed by “reconciliation” before the as-built SSCS are inspected and analyzed again.</p> <p>In the AC column, added “as-built” and changed “non-seismically designed” to “non-seismic” to reflect that this is associated with the final as-built components and piping after the reconciliation inspections and analysis so that the final inspections and analysis include any redesigned or reworked SSC from the initial inspections and analysis.</p>
69.	T2.11.1-1	Added ITAAC #12 per RAI 10.2-18 S03.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
70.	F2.11.1-1	Based on RAI 14.3-449 S02, new Figure 2.11.1-1, TMSS Functional Arrangement, is added to show the layout of the TMSS and to identify the scope of equipment and piping within the TMSS for purposes of performing the ITAAC. The new figure is based on DCD Tier 2 Figures 3.2-1 and 10.3-1.
71.	T2.11.4-1	Added Table 2.11.4-1 per RAI 10.2-18 S03.
72.	S2.11.4	Revised “RTNSS” wording to include a list of equipment and SSCs from Chapter 19, Table 19A-3. Reference RAI 10.2-18 S03 part B11. This list appears as new table 2.11.4-1 and ITAAC are moved to Table 2.11.4-2
73.	S2.12.3, Design Description #3	RAI 14.3-449 S02 Revision Modified to: “RCCWS flow can be established and controlled from the MCR.”
74.	T2.12.3-1, ITAAC #2	RAI 14.3-449 S02 Revision ITA Column: Changed “demonstrate” to “verify”. AC Column: Changed to “A flow path exists from the RCCWS to the nuclear island chillers, standby diesel generators, and to support operation of FAPCS.”
75.	T2.12.3-1, ITAAC #3	RAI 14.3-449 S02 Revision DC Column: Modified to: RCCWS flow can be established and controlled from the MCR. ITA Column: Deleted “capability.” AC Column: Modified to: “RCCWS pumps can be operated and flow controlled from the MCR.”
76.	T2.12.3-1, ITAAC #4	RAI 14.3-449 S02 Revision ITA and AC Columns: Added “exists and.”  NOTE: See related Tier 1 definition: Inspect for Retrievability of a display means to visually observe that the specified information appears on a monitor when summoned by the operator.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
77.	F2.12.3-1	Added pump suction cross-connect valve in response to RAI 14.3-455.
78.	S2.12.5, Design Description #3	RAI 14.3-449 S02 Revision Modified to: "NICWS flow can be established and controlled from the MCR."
79.	T2.12.5-1, ITAAC #2	RAI 14.3-449 S02 Revision ITA Column: Changed "demonstrate" to "verify". AC Column: Changed to "A flow path exists from the NICWS to the RCCWS and HVAC systems."
80.	T2.12.5-1, ITAAC #3	RAI 14.3-449 S02 Revision DC Column: Modified to: "NICWS flow can be established and controlled from the MCR." ITA Column: Deleted "capability." AC Column: Modified to: "NICWS pumps and chillers can be operated and flow controlled from the MCR."
81.	T2.12.5-1, ITAAC #4	RAI 14.3-449 S02 Revision ITA and AC Columns: Added "exists and."  NOTE: See related Tier 1 definition: Inspect for Retrievability of a display means to visually observe that the specified information appears on a monitor when summoned by the operator.
82.	S2.12.7, Design Description #3	RAI 14.3-449 S02 Revision Modified to: "PSWS flow can be established and controlled from the MCR."
83.	T2.12.7-1, ITAAC #2	RAI 14.3-449 S02 Revision ITA Column: Changed "demonstrate" to "verify". AC Column: Changed to "A flow path exists from the PSWS to the RCCWS."

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
84.	T2.12.7-1, ITAAC #3	RAI 14.3-449 S02 Revision DC Column: Modified to: PSWS flow can be established and controlled from the MCR. ITA Column: Deleted “capability.” AC Column: Modified to: “PSWS pumps can be operated and flow controlled from the MCR.”
85.	T2.12.7-1, ITAAC #4	RAI 14.3-449 S02 Revision ITA and AC Columns: Added “exists and.”  NOTE: See related Tier 1 definition: Inspect for Retrievability of a display means to visually observe that the specified information appears on a monitor when summoned by the operator.
86.	S2.13.1, Design Description #3a and #3b	In Item 3a, “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. In Item 3b, “Separation is” is changed to “Physical separation and electrical isolation are” to reflect that the item covers both physical separation and electrical isolation, and “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. These consistency changes are based on RAI 14.3-449 S02.
87.	S2.13.1, Design Description #11e	Added a new Item #11e based on RAI 14.3-449 S02 to move the UAT and RAT physical separation from ITAAC #11a, which is related physical separation of circuits.
88.	T2.13.1-2, ITAAC #3a	In ITAAC 3a, “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. The change is a consistency item based on RAI 14.3-449 S02.

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

Item	Location	Description of Change
89.	T2.13.1-2, ITAAC #3b	<p>In ITAAC 3b, DC column, “Separation is” is changed to “Physical separation and electrical isolation are” to reflect that the ITAAC covers both physical separation and electrical isolation, and “required” is changed to “defined” to reflect that a regulatory guide does not, itself, establish requirements. In the AC column, “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. In the ITA column, added “and analysis” to reflect that an engineering evaluation may be necessary to verify the acceptance criteria are met for electrical isolation. These consistency changes are based on RAI 14.3-449 S02.</p>
90.	T2.13.1-2, ITAAC #11a	<p>Added the following to the AC column based on RAI 14.3-449 S02:</p> <p>“in accordance with IEEE-384”</p> <p>as per Tier 2, Table 8.1-1, which shows the applicability of IEEE-384 to the onsite power supplies.</p> <p>This change reflects that the physical separation will be in accordance with the acceptance criteria for physical separation of electrical equipment as described in Table 2 of IEEE-384.</p> <p>The previous first bullet on UAT and RAT separation is moved to a new ITAAC #11e.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
91.	T2.13.1-2, ITAAC #11d	<p>Added the following to the AC column based on RAI 14.3-449 S02:</p> <p>“as defined in IEEE-384.”</p> <p>This change reflects that the physical separation will be in accordance with the acceptance criteria for physical separation of electrical equipment defined in Table 2 of IEEE-384, as per Tier 2, Table 8.1-1, for onsite power supplies.</p>
92.	T2.13.1-2, ITAAC #11e	<p>Added a new ITAAC based on RAI 14.3-449 S02 to move the UAT and RAT physical separation from ITAAC #11a, which relates to physical separation circuits. The method of verification includes both inspection and analysis. Inspection will verify either the existence of barriers or spatial distance, or both. The analysis will evaluate the type of barrier and spatial distance to ensure that the physical separation is adequate to minimize to the extent practical the likelihood of their simultaneous failure under design basis conditions, according to the criteria stated in Tier 2, Section 8.3.1.1, and in RG 1.189, as discussed in Tier 2, Sections 9.5.1.10 and 9.5.1.12.1. RG 1.189 is referenced because it provides the regulatory position for the first protection features. Also, RG 1.189, Section 8.4, refers to NFPA 804 as guidance for advanced reactors, but states “the NRC has not formally endorsed NFPA 804, and some of the guidance in the NFPA standard may conflict with regulatory requirements. When conflicts occur, the applicable regulatory requirements and guidance, including the guidance in this regulatory guide, will govern.” Therefore, NFPA 804 guidance may be applicable through RG 1.189, but with any specific exceptions that the NRC guidance may address.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
93.	T2.13.1-2, ITAAC #12a	<p>Added the following to the AC column based on RAI 14.3-449 S02:</p> <p>“as defined in IEEE-384.”</p> <p>This change reflects that the physical separation will be in accordance with the acceptance criteria for physical separation of electrical equipment defined in Table 2 of IEEE-384, as per Tier 2, Table 8.1-1, for onsite power supplies.</p>
94.	T2.13.1-2, ITAAC #12d	<p>Added the following to the AC column based on RAI 14.3-449 S02:</p> <p>“as defined in IEEE-384.”</p> <p>This change reflects that the physical separation will be in accordance with the acceptance criteria for physical separation of electrical equipment defined in Table 2 of IEEE-384, as per Tier 2, Table 8.1-1, for onsite power supplies.</p>
95.	S2.13.3, Design Description #6	<p>In Item 6, “Separation is” is changed to “Physical separation” to reflect that the item covers physical separation, and “required” is changed to “defined” to reflect that a regulatory guide does not, itself, establish requirements. These consistency changes are based on RAI 14.3-449 S02.</p>
96.	T2.13.3-3, ITAAC #4iii	<p>In the ITA column, “as-installed” is changed to “as-built” based on RAI 14.3-449 S02 as a consistency change.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
97.	T2.13.3-3, ITAAC #6	In ITAAC 6, DC column, “Separation is” is changed to “Physical separation is” to reflect that the ITAAC covers only physical separation, as consistent with the AC column, and “required” is changed to “defined” to reflect that a regulatory guide does not, itself, establish requirements (except that Tier 1 will establish requirements based on RG 1.75). In the AC column, “required” is changed to “defined” to reflect that a regulatory guide does not, itself, establish requirements. In the ITA column, added “and analysis” to reflect that an engineering evaluation may be necessary to verify the acceptance criteria are met. These consistency changes are based on RAI 14.3-449 S02.
98.	S2.13.4-2, Design Description # 2b	Based on RAI 14.3-449 S02, the following consistency change is made:  Item 2b is modified by adding: “is capable of operating at its nameplate rated load and”.
99.	S2.13.4-2, Design Description #2c	Based on RAI 14.3-449 S02, the following consistency change is made:  Item 2c is modified by adding: “based on expected SDG load.”
100.	S2.13.4-2, Design Description #5c	Based on RAI 14.3-449 S02, the following consistency change is made:  Item 5c is modified by adding: “is capable of operating at its nameplate rated load and”.
101.	S2.13.4-2, Design Description #5d	Based on RAI 14.3-449 S02, the following consistency change is made:  Item 5d is modified by adding: “based on expected ADG load.” Changed “7” to “seven” for consistency.

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
102.	T2.13.4-2, ITAAC #2b	<p>Based on RAI 14.3-449 S02, the following consistency changes are made so that the DC and the AC column are clear and consistent with each other:</p> <p>The DC column is changed to address the testing described in the ITA and now reads as follows:</p> <p>“Each standby diesel generator is capable of operating at its nameplate rated load and is sized to accommodate its expected loads.”</p> <p>The AC column now reads as follows: “Each as-built standby diesel generator provides power at generator terminal rated voltage and frequency when at operated at rated load, and expected loads are within the rated nameplate load.”</p> <p>Also, the ITA column is changed to reflect that analysis of test results will be necessary to compare to expected loads and verify that the acceptance criteria are met. The ITA column now includes: “Analysis will be performed to demonstrate that the expected loads are within the nameplate rated load.”</p>
103.	T2.13.4-2, ITAAC #2c	<p>Based on RAI 14.3-449 S02, the following consistency changes are made:</p> <p>In both the DC and AC columns, added “based on expected SDG load.” In the AC column, changed “7” to “seven” to be consistent with the DC column.</p>
104.	T2.13.4-2, ITAAC #2d	<p>Based on RAI 14.3-449 S02, the following consistency changes are made:</p> <p>In the AC column, changed “running fully loaded” to “operating between rated and maximum nameplate load” to be consistent with the ITA column.</p>

ESBWR DCD Tier 1

26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
105.	T2.13.4-2, ITAAC #2g	<p>Based on RAI 14.3-449 S02, the following changes are made to make the ITA and AC columns consistent with each other and with the DC column:</p> <p>The ITA column is changed to read: “Inspection and testing will be performed to demonstrate that lube oil temperature, pressure and sump level instrumentation is provided and monitors operation of the system.”</p> <p>The AC column is changed for consistency with the DC column to read: “Each standby diesel generator has instrumentation provided to monitor lube oil temperature, pressure and sump level, ensuring proper operation of the system.”</p>
106.	T2.13.4-2, ITAAC #5c	<p>Based on RAI 14.3-449 S02, the following consistency changes are made:</p> <p>The DC column is changed to address the testing described in the ITA and now reads as follows:</p> <p>“Each ancillary diesel generator is capable of operating at its nameplate rated load and is sized to accommodate its expected loads.”</p> <p>The AC column now reads as follows: “Each as-built ancillary diesel generator provides power at generator terminal rated voltage and frequency when operated at rated load, and expected loads are within the rated nameplate load.”</p> <p>Also, the ITA column is changed to reflect that analysis of test results will be necessary to compare to expected loads and verify that the acceptance criteria are met. The ITA column now includes: “Analysis will be performed to demonstrate that the expected loads are within the nameplate rated load.”</p>

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
107.	T2.13.4-2, ITAAC #5d	<p>Based on RAI 14.3-449 S02, the following changes are made to make the DC and AC columns consistent with each other:</p> <p>In both the DC and AC columns, added “based on expected ADG load.” In the AC column, changed “7” to “seven” to be consistent with the DC column. In the AC column, changed “that is operating at rated load” to “under continuous operation” to be consistent with the corresponding SDG ITAAC #2c.</p>
108.	T2.13.4-2, ITAAC #5e	<p>Based on RAI 14.3-449 S02, the following consistency changes are made:</p> <p>In the AC column, changed “running fully loaded” to “operating between rated and maximum nameplate load” to be consistent with the ITA column.</p>
109.	S2.13.5, Design Description #5	<p>In Item 5, “Separation is” is changed to “Physical separation and electrical isolation are” to reflect that the item covers both physical separation and electrical isolation, and “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. These consistency changes are based on RAI 14.3-449 S02.</p>
110.	T2.13.5-2, ITAAC 3iii	<p>In the ITA column, “as-installed” is changed to “as-built” based on RAI 14.3-449 S02. This is a consistency change to be consistent with other similar ITAAC.</p>

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
111.	T2.13.5-2, ITAAC 5	In ITAAC 5, DC column, “Separation is” is changed to “Physical separation and electrical isolation are” to reflect that the ITAAC covers both physical separation and electrical isolation, and “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. In the AC column, “required” is changed to “defined” to reflect that a regulatory guide does not establish requirements. These consistency changes are based on RAI 14.3-449 S02.
112.	S2.13.8, Design Description #3	Based on RAI 14.3-449 S02, Item 3 is modified from “electrically independent and physically separated” to “physically separated” in order to reflect that this item is related to physical separation. Item 6 addresses electrical isolation. Also, reference to cables being routed in separate raceways is deleted and addressed as part of the acceptance criteria in the related ITAAC #3. Tier 2, Section 9.5.3.3.3.1, explains this MCR and RSS emergency lighting design configuration. Tier 2, Section 8.3.2.1 discusses the independence of MCR emergency lighting and Figure 8.1-4 shows that the RSS emergency lights are on separate buses.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
113.	T2.13.8-1, ITAAC #3	<p>Based on RAI 14.3-449 S02, in the DC and AC columns, ITAAC 3 is modified from “electrically independent and physically separated” to “physically separated” in order to reflect that this item is related to physical separation. Item 6 addresses electrical isolation for the safety-related power supply connection to the nonsafety-related cables to the lighting fixtures (see Tier 2, Section 9.5.3.3.3.1). The lighting fixtures themselves are located in the MCR and RSS and are placed according to illumination requirements. Also, reference to cables being routed in separate raceways is deleted and addressed as part of the acceptance criteria in the AC column.</p> <p>The following is added to the AC column to indicate that the physical separation will be verified to be in accordance with the separation criteria discussed in Tier 2 and which will be implemented through the detailed design:</p> <p>“according to RG 1.75 and IEEE 384, through spatial separation, physical barriers, or separate raceways, conduit or metal troughs, up to the electrical isolation devices. Safety-related cables are routed in respective divisional raceways or conduit. Nonsafety-related cables from the isolation devices to the light fixtures are in separate raceways or conduit.”</p> <p>The power supply for MCR and RSS lighting systems is safety-related up to the connections for the lighting fixtures, where two series electrical isolation devices are installed for separation of the safety-related power from the nonsafety-related lighting fixtures (Tier 2, Section 9.5.3.3.3.1, explains this MCR and RSS emergency lighting design configuration). Separation criteria details for the safety-related power supplies are as described in Tier 2, Section 8.3.1.4.1, which is as suggested by SRP 14.3 for the details of physical separation for electrical equipment.</p>

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

Item	Location	Description of Change
114.	T2.13.8-1, ITAAC #6	<p>Based on RAI 14.3-449 S02, in the ITA column, ITAAC 6 is modified to add “and analysis” because the electrical isolation between the nonsafety-related and safety-related devices may require analysis. Also, “as-built” is added to the AC column to indicate that the inspection and analyses is for the as-built electrical isolation device to verify that the construction is consistent with the design as described in Tier 2.</p> <p>Criteria for isolation devices are as defined in IEEE-384, Section 7, which is referenced in Tier 2, Chapter 8, for the DC power system. The details need not be in the ITAAC as per SRP 14.3. As noted above, the power supply for MCR and RSS lighting systems is safety-related up to the connections to the nonsafety-related cables for the lighting fixtures. Two series electrical isolation devices are installed for separation of the safety-related power from the nonsafety-related cable to the lighting fixtures (Tier 2, Section 9.5.3.3.3.1, explains this MCR and RSS emergency lighting design configuration). Section 8.1.5.2.4 and Table 8.1-1 commits to RG 1.75 and IEEE-384, which provide guidance for electrical isolation, for this system. Thus, for the ITAAC, RG 1.75 and IEEE-384, provide the acceptance criteria for the isolation devices, which are safety-related because they are used to isolate safety-related power from nonsafety-related cables for the lighting systems.</p>
115.	T2.13.8-1, ITAAC #7	<p>Based on RAI 14.3-449 S02, added to ITA column “and tests (as needed)” to reflect that testing of power supplies may be included in the verification that acceptance criteria are met. Tier 2, Section 9.5.3.3.3.1, describes the MCR and RSS emergency lighting.</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
116.	S2.15.1, Design Description	Based on RAI 14.3-449 S02, added the following for consistency with previous changes regarding displays, alarms and controls: “The MCR set of displays, alarms and controls, based on the applicable codes and standards, including Human Factors Engineering (HFE) evaluations and emergency procedure guidelines, for the Containment System is addressed in Section 3.3.”
117.	S2.15.1, Design Description #11	Item 11 is deleted for consistency with the addition of the material in the preamble material. RAI 14.3-449 S02
118.	S2.15.1, Design Description #16b	Based on RAI 14.3-449 S02, added “at design basis accident conditions” to Item 16b. This is a consistency change.
119.	T2.15.1-2, ITAAC #11	Based on RAI 14.3-449 S02, added the following for consistency with previous changes regarding displays, alarms and controls, ITAAC 11 is deleted because it is addressed by Section 3.3 of Tier 1.
120.	T2.15.1-2, ITAAC #16a	Based on RAI 14.3-449 S02, the following change is made: In the ITA column, added: “An inspection will be performed in the MCR.” This is a consistency change.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
121.	T2.15.1-2, ITAAC #16b	<p>Based on 14.3-449 S02, the following changes are made:</p> <p>In the DC column, added: “at design basis accident conditions”.</p> <p>In the ITA column, added: “An inspection will be performed in the MCR.”</p> <p>In the AC column, added: “Indication exists in the MCR.”</p> <p>These are consistency changes.</p>
122.	T2.15.4-2, Item 2a1, Acceptance Criteria	Added “hydrogen combustion” in response to RAI 6.2-202.
123.	T2.15.4-2, Item 2b1, Acceptance Criteria	Added “hydrogen combustion” in response to RAI 6.2-202.
124.	T2.15.4-2, ITAAC #5iii ITA and AC	Added “, including the hydrodynamic effects of surrounding water for submerged components”. RAI 3.9-247 S01
125.	T2.15.4-2, ITAAC #14	Changed the AC column from “...vent fan line is > 9.5 in (± 0.5 in) and < 24 cm (±1 cm) below the top of the drain pan lip” to “vent fan line is 24 cm (9.4 in) below the top of the drain pan lip with a tolerance of 1.4 cm (0.6 in)” in response to RAI 6.2-140 S05.
126.	T2.16.1-1, ITAAC #10	<p>RAI 14.3-449 S02 Revision (for consistency with changes made in Table 2.5.5-1)</p> <p>ITA Column: Deleted “Inspection of the as-built RB crane design documents will be performed for completion of the following inspections and tests” and replaced with “The following inspections and tests will be conducted.”</p>

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
127.	T2.16.1-1, ITAAC #11	RAI 14.3-449 S02 Revision (for consistency with changes made in Table 2.5.5-1)  ITA Column: Deleted “Inspection of the as-built FB crane design documents will be performed for completion of the following inspections and tests” and replaced with "The following inspections and tests will be conducted."
128.	S2.16.2.1 Design Description	Updated in response to RAI 9.4-58.
129.	S2.16.2.1, Design Description	Added: “RBVS alarms, displays, controls, and status indications in the MCR are addressed by Section 3.3 in response to RAI 14.3-449 S02.
130.	S2.16.2.1, Design Description #8	Deleted Item 8 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
131.	S2.16.2.1, Design Description #13	Updated in response to RAI 9.4-58.
132.	S2.16.2.2 #11	Added Design Description #11, “The CRHA is provided with differential pressure indication for monitoring under normal and emergency operation”, in response to 14.3-449 S02 and RAI 6.4-23.
133.	S2.16.2.3, Design Description	Added: “EFU alarms, displays, controls, and status indications in the MCR are addressed by Section 3.3.” This is a consistency item based on RAI 14.3-449 S02.
134.	S2.16.2.3, Design Description #8	Deleted Item 8 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
135.	S2.16.2.5, Design Description	Added: “FBVS alarms, displays, controls, and status indications in the MCR are addressed by Section 3.3.” This is a consistency item based on RAI 14.3-449 S02.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
136.	S2.16.2.5, Design Description #6	Deleted Item 6 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
137.	T2.16.2-2, ITAAC #8	Deleted ITAAC 8 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
138.	T2.16.2-2, ITAAC #9	Based on RAI 14.3-449 S02, “as defined by RG 1.75” is added to the AC column for ITAAC 9.ii to indicate that the electrical isolation and physical separation of the as-built dampers will be verified to be as per Tier 2, Section 8.3.1.4.
139.	T2.16.2-2, ITAAC #11	Updated in response to RAI 9.4-53 S01.
140.	T2.16.2-2, ITAAC #13	Updated in response to RAIs 9.4-58.
141.	T2.16.2-3, Line 5	Added “CRHA Variable Orifice Relief Device” to table in response to RAI 6.4-23.
142.	T2.16.2-4, ITAAC #4	ITAAC updated in response to RAI 6.4-24 S01 and RAI 6.4-24 S01 Revision 1.
143.	T2.16.2-4, ITAAC #4i and #4ii	Updated in response to RAI 9.4-55.
144.	T2.16.2-4, ITAAC #4iii	Row 4iii added to detail ITAAC governing high humidity condition to ensure that the CRHA remains within acceptable temperature/humidity limits, specified by a 86 F wet bulb temperature. This is in response to RAI 6.4-24.

**ESBWR DCD Tier 1**  
**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
145.	T2.16.2-4, ITAAC #5ii	RAI 14.3-449 S02 Revision  AC Column: Added “as defined in RG 1.75” to be consistent with changes to other similar tables in Subsections of 2.16.
146.	T2.16.2-4, ITAAC # 11	Added ITAAC #11 in response to RAI 6.4-23.
147.	T2.16.2-6, ITAAC #4	Based on RAI 14.3-449 S02, “as defined by RG 1.75” is added to the AC column for ITAAC 4.ii to indicate that the electrical isolation and physical separation of the as-built dampers will be verified to be as per Tier 2, Section 8.3.1.4.
148.	F2.16.3-1	Deleted note 3 in response to RAI 14.3-455. Added dedicated line from the FPS to FAPCS for IC/PCCS and SFP makeup in response to RAI 9.1-142.
149.	T2.16.2-6, ITAAC #8	Deleted ITAAC 8 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
150.	T2.16.2-9, ITAAC #6	Deleted ITAAC 6 because indications and controls are addressed by HFE in Section 3.3. This is a consistency item based on RAI 14.3-449 S02.
151.	S2.16.3, Design Description #7	Changed “and” to “or” in response to RAI 9.1-141.
152.	T2.16.3-2, ITAAC #7	Changed “and” to “or” in response to RAI 9.1-141.
153.	S2.19	Added “of the standard plant in the 1 <sup>st</sup> paragraph in response to RAI 14.3-440 S01.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
154.	S2.19, Design Description #1	Changed (1) a to present tense as required by Tier 1 Guidance. Revised the wording and changed designation from (1) b to (1) b-1; to indicate that COL has to provide another piece to item (1) 1.b response to RAI 14.3-440 S01.
155.	S2.19, Design Description #6	Revised the wording and changed designation from (6) to (6) a; to indicate that COL has to provide another piece to item (6) response to RAI 14.3-440 S01.
156.	S2.19, Design Description #10	Added “a” to indicate that COL needs to provide additional ITAAC for this item in response to RAI 14.3-440 S01.
157.	S2.19, Design Description #11	Deleted item (11) and added item (11) b-1; to indicate that COL has to provide other pieces to item (11) in response to RAI 14.3-440 S01.
158.	S2.19, Design Description #12	Added word “Secondary” in response to RAI 14.3-440 S01.
159.	S2.19, Design Description #13	Changed item (13) to (13) a; with minor word changes and added item (13) b-1 to address new ITAAC and to indicate that COL has to provide another piece to item (13) c in response to RAI 14.3-440 S01.
160.	S2.19, Design Description #14	Changed item (14) to (14) a; with minor word changes to indicate that COL has to provide another piece to item (14) in response to RAI 14.3-440 S01.
161.	S2.19, Design Description #15	Changed item (15) to (15) a; with added word changes to indicate that COL has to provide another piece to item (14) in response to RAI 14.3-440 S01.
162.	S2.19, Design Description #16	Changed item (16) a to (16) a-1 and (16) b to (16) b-1 with minor word changes to indicate that COL has to provide other pieces to item (16) a and b in response to RAI 14.3-440 Sup 1. Added new (16) c-1 to address new ITAAC and to indicate that COL has to provide another piece to item (16) c in response to RAI 14.3-440 S01.

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
163.	T2.19-1, ITAAC #1a	Minor word changes in DC and ITA columns in response to RAI 14.3-440 S01.
164.	T2.19-1, ITAAC #1b	Added “-1” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
165.	T2.19-1, ITAAC #6a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
166.	T2.19-1, ITAAC #10a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
167.	T2.19-1, ITAAC #11	Deleted item 11a. Added item (11) b-1 to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
168.	T2.19-1, ITAAC #12a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
169.	T2.19-1, ITAAC #13a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
170.	T2.19-1, ITAAC #13b	Added new item (13) b-1 to address new ITAAC and to indicate that COL needs to provide additional ITAAC for this item. in response to RAI 14.3-440 S01.
171.	T2.19-1, ITAAC #14a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
172.	T2.19-1, ITAAC #15a	Added “a” to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
173.	T2.19-1, ITAAC #16a & #16b	Changed item (16) a to (16) a-1 and (16) b to (16) b-1 to indicate that COL needs to provide additional ITAAC for this item. Revised wording in DC, ITA and AC columns in response to RAI 14.3-440 S01.
174.	T2.19-1, ITAAC #16c	Added new item (16) c-1 to address new ITAAC and to indicate that COL needs to provide additional ITAAC for this item. in response to RAI 14.3-440 S01.
175.	S3.6	Revise scope of D-RAP in response to RAI 17.4-23.
176.	S3.6, Design Description #1	Revised to incorporate final wording to D-RAP ITAAC provided by NRC and agreed to by GEH on a conference dated 3/3/2010 (reference RAI 17.4-23 S03, MFN 09-620-S01).
177.	T3.6-1, ITAAC #1	Revise scope of D-RAP in response to RAI 17.4-23.
178.	T3.6-1, ITAAC #1	Revised to incorporate final wording to D-RAP ITAAC provided by NRC and agreed to by GEH on a conference dated 3/3/2010 (reference RAI 17.4-23 S03, MFN 09-620-S01).
179.	S3.8, Design Description	Revised description of scope of Section 3.8 to change the intent from the programmatic focus. See RAI 14.3-449 S02. This section of Tier 1 is based on the description in Tier 2, Section 3.11.
180.	T3.8-1	A new table is added to Section 3.8 to include a list of electrical and mechanical equipment that are within the scope of the associated ITAAC. This section of Tier 1 is based on the description in Tier 2, Section 3.11. See RAI 14.3-449 S02 and additional changes submitted under MFN 10-079.
181.	T3.8-2	The table number is changed from Table 3.8-1 to Table 3.8-2. See RAI 14.3-449 S02. This section of Tier 1 is based on the description in Tier 2, Section 3.11.

## ESBWR DCD Tier 1

### 26A6641AB Revision 6 to Revision 7 Change List

Item	Location	Description of Change
182.	T3.8-2, ITAAC #1	Changed to remove programmatic focus and to reference to Table 3.8-1 for the list of electrical equipment subject to environmental qualification. The first sentence of the ITAAC in the ITA and AC columns is removed. Item i in the ITA column and AC column is deleted. Items ii and iii are modified to reflect the appropriate scope of equipment and remove the programmatic focus. See RAI 14.3-449 S02. In ITAAC subpart ii, “analyses” is removed to reflect that it cannot be used alone as a qualification method. This section of Tier 1 is based on the description in Tier 2, Section 3.11.
183.	T3.8-2, ITAAC #2	Changed to remove programmatic focus and to reference to Table 3.8-1 for the list of mechanical equipment subject to environmental qualification. The first sentence of the ITAAC in the ITA and AC columns is removed. Item i in the ITA column and AC column is deleted. Items ii and iii are modified to reflect the appropriate scope of equipment and remove the programmatic focus. See RAI 14.3-449 S02. In ITAAC subpart ii, “analyses” is removed to reflect that it cannot be used alone as a qualification method. This section of Tier 1 is based on the description in Tier 2, Section 3.11.
184.	T3.8-2, ITAAC #3	Changed to remove programmatic focus and to define the scope of digital I&C equipment subject to environmental qualification. The first sentence of the ITAAC in the ITA and AC columns is deleted. Item i in the ITA column and AC column is changed to be a {{Design Acceptance Criteria}} ITAAC for identifying the scope of equipment subject to the ITAAC. Items ii and iii are modified to reflect the appropriate scope of equipment and remove the programmatic focus. See RAI 14.3-449 S02. In ITAAC subpart ii, “analyses” is removed to reflect that it cannot be used alone as a qualification method. This section of Tier 1 is based on the description in Tier 2, Section 3.11.

**ESBWR DCD Tier 1**

**26A6641AB Revision 6 to Revision 7 Change List**

<b>Item</b>	<b>Location</b>	<b>Description of Change</b>
185.	T3.8-2, ITAAC #4	Changed to remove programmatic focus and to define the digital I&C equipment subject to seismic qualification. Item i in the ITA column and AC column is modified to reflect the appropriate scope and to identify it as {{Design Acceptance Criteria}} for the applicable scope of equipment to be seismically qualified. Items ii and iii are modified to reflect the appropriate scope. See RAI 14.3-339 S02. In ITAAC subpart ii, “analyses” is removed to reflect that it cannot be used alone as a qualification method. This section of Tier 1 is based on the description in Tier 2, Section 3.11.
186.	T5.1-1, Soil Properties	Added minimum static bearing capacity in response to RAI 2.5-11.
187.	T5.1-1, Soil Properties	Added the following text under “Angle of Internal Friction” in response to RAI 3.8-96 S05 R1: “(in-situ and backfill)”.
188.	T5.1-1, Soil Properties	Added the requirements for backfill on sides of and underneath Seismic Category I structures in response to RAI 3.8-96 S05 R1.
189.	T5.1-1	Deleted “Roof” under description of the blowout panels in the RB. MFN 10-117
190.	T5.1-1, Note (2)	Clarified Note in response to RAI 2.5-11.
191.	T5.1-1, Note (3)	Clarified Note in response to RAI 3.8-96 S05.