

**ESBWR DCD Chapter 4 – Reactor**

**22A6642AP Revision 0 to Revision 1 Change List**

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	Cover Sheet	Deleted the Conditional Release statement.
2	Abbreviations and Acronyms List	Deleted the parenthetical “(non-seismic Category I)” in the definition of the term NS (Non-Seismic).
3	Subsection 4.1.2.1, 5 <sup>th</sup> bullet, 2 <sup>nd</sup> sentence	Changed from “single control rod fully withdrawn” to “single control rod, or rod pair, fully withdrawn”.
4	Section 4.2 – all subsections	Section 4.2 has been rewritten to include more detailed information pertaining to the Fuel System Design per NRC request.
5	Section 4.3 – all subsections	Section 4.3 has been rewritten and rearranged to include more detailed information pertaining to the Nuclear Design per NRC request.
6	Section 4.4	Revised as described in MFN 05-115.
7	Subsection 4.4.1	Revised as described in MFN 05-115.
8	Subsection 4.4.2	Revised as described in MFN 05-115.
9	Subsection 4.4.3	Revised as described in MFN 05-115. The original contents of 4.4.3 are now 4.4.4
10	Subsection 4.4.4.5	Since load following is discussed in DCD Chapter 7, this subsection was added.
11	Subsection 4.4.5	The original contents of this subsection were moved to 4.4.1 through 4.4.3. The contents of 4.4.5 were the original contents of 4.4.4.
12	Subsection 4.4.7	Revised to clarify the COL requirements.
13	Subsection 4.4.8	Reference 4.4-9 was corrected to the ESBWR specific TRACG LTR. Reference 4.4-10 through 4.4-14 was added as required with the changes to 4.4.1 through 4.4.3.
14	Table 4.4-1a	Changed the maximum inlet velocity for ABWR from “26.7” to “2.29” meter/sec.
15	Table 4.4-1a/b	The 91.6 core maximum exit voids (%) and the 0.32 average void fraction was not representative of ESBWR. These values were replaced with core simulator values of 90.0 and 0.53 respectively.

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16	Table 4.4-2a/b, 4.4-3a/b	The core average value was not representative of ESBWR. This value was removed. The axial location of the nodes was added.
17	Table 4.4-4a/b	The axial power shapes were renormalized and a note was added to explain the nodal power basis. The axial location of the nodes was added.
18	Table 4.4-5	This table was added to represent the channel with the highest void fraction as predicted by the PANACEA core simulator. This table is referenced in section 4.4.3.2.
19	Subsection 4.5.3.1	Added reference to Subsection 4.5.1.2.1 for COL discussion of CRD inspection program.
20	Subsections 4.6.2.1.4 and 4.6.6.1	Moved the detailed COL discussion from Subsection 4.6.6.1. to Subsection 4.6.2.1.4.
21	Subsection 4A.1	Deleted reference to the Technical Specifications.
22	Section 4B.3, 6 <sup>th</sup> paragraph, 2 <sup>nd</sup> sentence	Changed from “most reactive control rod in its full-out position” to “most reactive control rod, or rod pair, in the full-out position”.
23	Subsections 4D.1.4.3 and 4D.3	Moved the detailed COL discussion from Subsection 4D.3 to Subsection 4D.1.4.3.
24	Subsection 4D.1.5, 5 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Changed from “447°K” to “447 K”.
25	Subsection 4D.1.6, both sentences	Changed from “Section 15.5.4” to “Subsection 15.5.4”.
26	Subsection 4D.2	Revised to clarify reference to Dodewaard operating experience.
27	Subsection 4D.2.2.2, 4 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Changed from “around 40°K to less than 10°K” to “around 40 K to less than 10 K”.