

Changes From Revision 00 to Revision 01

DCD Tier 2, Chapter 10

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1	Section 10.1, page 10.1-2.	Minor grammar and punctuation 3 rd paragraph, 7 th paragraph, added “main” in front of steam and 1 st sentence of 8 th paragraph rewritten for clarity.
2	Table 10.1-1, page 10.1-6.	Additional details, corrected “Total head at runout, m (ft)” to “3373” for the ft to relate to 1028 m, added MW and hp rating for FW motor.
3	Figure 10.1-1, page 10.1.7.	Added additional details for clarity (Low Flow Control valve and FW tank Level Control valves).
4	Subsection 10.2.2.2, page 10.2-4, Moisture Separator Reheaters.	Corrected punctuation/grammar and added “and 7 th ” to the last sentence to clarify seven stages of FW heaters.
5	Subsection 10.2.2.2, page 10.2-5, Generator.	Capitalized first word of (1), (2), (3), & (4).
6	Subsection 10.2.2.4, page 10.2-6.	Punctuation corrections and grammar corrections throughout.
7	Subsection 10.2.2.4, 1 st paragraph, 2 nd paragraph, page 10.2-6 and 7.	Typo/editorial, changed ‘turbine trip’ to “rejection”, punctuated “non-safety related” and added a semi-colon at end of phrase (3).
8	Subsection 10.2.2.7, page 10.2-9, 2 nd & 3 rd paragraph, & (1).	Punctuation and grammar; Added a hyphen and deleted “one CIV valve” since it duplicated the already described control valve and intermediate valve in the sentence. Made valve names consistent and described on-line high rad valve testing as remotely indicated.
9	Subsection 10.2.3.1, page 10.2-9, last sentence.	Corrected typo/grammar.
10	Subsection 10.2.3.2, page 10.2-9, 2 nd & 3 rd paragraph.	Grammar/hyphen and comma.

11	Subsection 10.2.3.3, page 10.2-9, (2) & (5) on page 10.2-10.	Punctuation, added comma @ (2) and hyphen @ (5).
12	Subsection 10.2.3.5, pages 10.2-11 & 10.2-12.	Grammar and punctuation; Added hyphens at “in-service”, Corrected phrase to reflect coinciding times for dissimilar inspections, Changed “coast down” to two words and Changed packings to “packing”.
13	Subsection 10.2.5.1, 10.2.5.2 & 10.2.5.3, page 10.2-13.	Added hyphens to “warm-up” and “in-service” and punctuation/grammar.
14	Section 10.3, 2 nd paragraph, Subsections 10.3.1.1, 10.3.1.2, page 10.3-1.	Changed “pressure relief system” to “Safety Relief Valves (SRVs)”. Minor grammar/typo/punctuation throughout the page. Corrected Seismic Category II to “Non-seismic” to describe TMSS per Chapter 3, Sec. 3.2.
15	Subsection 10.3.2.1, page 10.3-2.	Minor grammar and punctuation throughout this section.
16	Subsection 10.3.2.2, page 10.3-2.	Changed to “hydrostatic” from hydro to describe the test.
17	Subsection 10.3.2.3, page 10.3-2, second paragraph.	Rewritten for clarity with punctuation and grammar corrections.
18	Subsections 10.3.3 & 10.3.4, page 10.3-3.	Grammar, “steam line” multiple places and added “plant” and “outside containment” for clarity..
19	Subsection 10.3.6.1, page 10.3-3.	Spelling, “ferrite”.
20	Section 10.3.6.2, page 10.3-4, b., c., & (2).	Minor punctuation and grammar corrections and reference correctly to Reference 10.3-1.
21	Figure 10.3-1, page 10.3-6.	Replaced figure with re-drawn figure that shows “N11” System to be “NS” instead of Class II. Reason: TMSS is analyzed and fabricated but not code stamped or designated Class II per DCD Chapter 3.
22	Figure 10.3-2, Sh 2 of 2, page 10.3-8.	Corrected typo at Heater “#7” from two #6’s.
23	Subsection 10.4.1, page 10.4-1, second paragraph.	No change.
24	Subsection 10.4.1.1, page 10.4-1, (1), (3).	(1) rewritten for clarity and (3) added hyphen.

25	Subsection 10.4.1.2.1, page 10.4-2, first paragraph, third paragraph, and forth paragraph.	Added a hyphen in the first paragraph. Third paragraph rewritten for grammatical clarity and corrected punctuation. Forth paragraph, split word “base mat”.
26	Subsection 10.4.1.2.2, page 10.4-2, first sentence.	Grammar/corrected plural verb.
27	Subsection 10.4.1.2.3, pages 10.4-2 & 10.4-3.	Minor grammar, sentence structure, punctuation, capitalization, hyphen and spelling corrections 2 nd paragraph through forth paragraph of page 10.4-3.
28	Subsection 10.4.1.3, page 10.4-4, forth paragraph.	Split “tube side” into two words.
29	Subsection 10.4.1.5.1, page 10.4-4, first and second paragraphs.	Minor grammar and spelling corrections.
30	Subsection 10.4.1.5.2, page 10.4-5, second and third paragraphs.	Minor grammar/spelling corrections.
31	Subsection 10.4.2, page 10.4-5.	Capitalized “Offgas System” and corrected the grammar in the referenced description at Subsection 9.4.4.
32	Subsection 10.4.2.1, page 10.4-6, (1).	Changed cooldown to “cool down”.
33	Subsection 10.4.2.2, page 10.4-6, third paragraph.	Hyphen at “non-condensing”, capitalization and added “produce an” before alarm to clarify action.
34	Subsection 10.4.2.3, page 10.4-7, second third & forth paragraphs.	Minor grammatical changes for clarity. Added PRMS to clarify radiation detectors.
35	Subsection 10.4.2.5.2, page 10.4-8, second & last sentence.	Minor grammar/hyphen added and unnecessary words deleted.
36	Subsection 10.4.3, page 10.4-8.	Typo, changed inleakage to “in-leakage”.
37	Subsection 10.4.3.5.3, page 10.4-10, Pressure, first paragraph.	Typo, inserted a “space” between words.

38	Subsection 10.4.4.1, page 10.4-11, (2).	Punctuation and grammar.
39	Subsection 10.4.4.3, page 10.4-12.	Hyphen @ “high-energy”.
40	Subsection 10.4.5.2.1, page 10.4-14, (1)-(6).	Grammar, capitalized and punctuated.

41	Subsection 10.4.5.2.3, page 10.4-15.	Hyphen @ “high-level” alarm.
42	Subsection 10.4.5.5, page 10.4-16, third and forth paragraphs.	Separated “flow meter” and added hyphen @ “re- circulated”.
43	Subsection 10.4.5.6, page 10.4-16, both paragraphs.	Typo, added two periods.
44	Subsection 10.4.5.7, page 10.4-16, (1), (2), (3).	Typo/ capitalization.
45	Subsection 10.4.5.8, page 10.4-17, second paragraph.	Rewritten for grammar and clarity.
46	Subsection 10.4.6.2.1, page 10.4-18, first paragraph.	Grammar rewritten for clarity..
47	Subsection 10.4.6.2.2, page 10.4-18, second paragraph.	Grammar, backwashable to “back-washable”.
48	Subsection 10.4.7.1, page 10.4-21, (1) and (6).	Grammar, changed ‘feedwater (FW)’ to “FW” in (1) and added the word “a” and “final feedwarer”to (6) to clarify ‘temperature’.
49	Subsection 10.4.7.2.1, page 10.4-22, second, third, and fifth paragraphs and page 10.4-23, second paragraph.	Minor grammar/editorial corrections and deletion of System after CPS, redundant word.
50	Subsection 10.4.7.2.2, page 10.4-23, 2 nd , 4 th &	Minor grammar/editorial corrections. Added the word “be” between “either and operated”for grammatical clarity..

	6 th paragraph.	
51	Subsection 10.4.7.2.2, page 10.4-23, 4 th paragraph, last sentence, 5 th & 6 th paragraphs.	At the forth paragraph, last sentence, added details provided for clarity. Rewritten first sentence of 5 th paragraph and all of 6 th paragraph for grammar, clarity, & details.
52	Subsection 10.4.7.2.2, page 10.4-24, 3 rd , 5 th , 6 th , & 8 th paragraphs.	Minor grammar/editorial corrections.
53	Subsection 10.4.7.2.3, pages 10.4-24 & 25, 1 st , 2 nd , & 3 rd paragraphs.	Corrected figure location of the FW tank level control valves in the 1 st paragraph. Minor typo correction in the 2 nd paragraph. Re-wrote the 3 rd paragraph to reflect the pre-heat up clean-up mode and low power operational mode of the low flow control valve.
54	Subsection 10.4.7.3, page 10.4-25,	Minor grammar/editorial correction.
55	Subsection 10.4.7.4.2, page 26.	Minor grammar/typo to title.
56	Subsection 10.4.7.5, page 26, 3 rd paragraph and throughout .	Deleted first word, minor grammar correction. Changed ‘feed’ and ‘feedwater’ to “FW”.
57	Table 10.4-1, page 10.4-28.	Corrected minor typo error.
58	Table 10.4-3, page 10.4-30.	Corrected minor typo error.
59	Table 10.4-6, page 10.4-34, new first row.	Added discussion/Failure Analysis on condensate and FW low flow control valve per Red Team request/comment.
60	Figure 10.4-1, page 10.4-35.	New simplified figure, revised to one sheet.
61	Figure 10.4-2, page 10.4-36.	New simplified figure revised to one sheet and showing low flow control valves and RWCU/SDC tie for recirc/clean-up.
62	Figure 10.4-5, page 10.4-39.	New figure that corrects TBS piping to “NS” from Class II in the N37 system within the turbine building.
63	Figure 10.4-7, page 10.4-41.	CPS figure revised to one sheet to simplify for clarity.
64	Figure 10.4-8a, page 10.4-42.	Revised from old sheet 1 to correctly reflect new title, ”LP Extraction Steam System”.

65	Figure 10.4-8b, page 10.4-43.	Revised from old sheet 2 to correctly reflect new title, “LP Drain and Vent System”.
66	Figure 10.4-9a, page 10.4-44.	Revised from old sheet 1 to correctly reflect new title, “HP Extraction Steam System”.
67	Figure 10.4-9b, page 10.4-45.	Revised from old sheet 2 to correctly reflect new title, “HP Drain and Vent System” and added missing drain from FW tank to condenser.
68	Section 10A.1, Summary Description, “5 th paragraph”	Minor typo/hyphen.
69	Table 10A.1-1, page 10A-3.	Corrected number typo at circulation water flow rates to delete extra, un-needed numbers within the value column.
70	Table 10A.1-1, pages 10A-4 & 5.	Corrected typo’s “lbm/hr” MW (MBtu/hr). Corrected to delete decimals and round-out. Corrected typo at Reactor FW Pumps to delete extra numbers from the flow value.
71	Subsection 10A.2.2.2, page 10A-9.	First sentence rewritten for clarity and accuracy.
72	Subsection 10A.2.2.2, page 10A-10, through page 10A-13.	Corrected twelve (12) minor typo/grammar errors as marked.
73	Subsection 10A.2.3.2, page 10A-16.	Typo, period at end of paragraph.
74	Subsection 10A.2.3.4, page 10A-16.	Typo, period at end of (5).
75	Section 10A.2.3.6, pages 17, 18, 19, & 21.	Corrected minor typo/grammar error at each page indicated.
76	Subsection 10A.2.5.3, page 10A-23.	Corrected typo in title.
77	Subsection 10A.3.2.3, page 10A-25.	Typo corrected.
78	Subsection 10A.4.1.2.1, page 30, 1 st & 4 th paragraphs.	Corrected two typos, one in each paragraph.
79	Subsection 10A.4.7.2.2, page 10A-37, 4 th & 5 th paragraphs.	Corrected three (3) typo/grammar errors.
80	Subsection 10A.4.7.4.2, page 10A-	Corrected title typo.

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81	Subsection 10A.4.7.5, page 10A-37, 2 nd & 3 rd paragraphs.	Corrected four (4) typo/grammar errors.
82	Subsection 10A.4.8, page 10A-37.	Corrected title typo.
83	Table 10A.4-1, page 10A-38, rows 1 & 5.	Rewrote row one for clarity and deleted extra numbers/typo in row 5.
84	Figure 10A.4-2, sheets 1 & 2.	Corrected figure to reflect parallel/one-pass flow of CIRC through the condensers.
85	Subsection 10.2.2.7, 3 rd paragraph, page 10.2-9, (late comment entry 10-21-05).	Delete the last sentence of the third paragraph. This is a typo repeat of the intent of the first sentence that already commits to “remote indication” as a means of observation since these valves are in a high rad area.
86	Subsection 10.4.1.5.2, page 10.4-5, second paragraph, first sentence (10-21-05).	Replace annunciator with “alarm”. It is an alarm that activates.
87	Subsection 10.4.3.5.1, page 10.4-10, second sentence (10-21-05).	Replace annunciator with “alarm”. It is an alarm that activates.
88	Subsection 10.4.7.2.1, page 10.4-22, 6 th paragraph (10-21-05).	Paragraph rewritten for clarity to correctly reflect operation of the high pressure heater by-pass valve.
89	Subsection 10.4.7.2.2, page 10.4-23, 5th paragraph, 1st sentence, (10-21-05).	Deleted the words, “the high pressure end of”, since there is no “high pressure end of the turbine building”. This was a typo error.
90	Subsection 10.2.2.5, page 10.2-8, typo at (12).	Typo/period at (12) deleted.
91	Subsection 10A.2.2.1, page 10A-9 & 10A-13.	Typo, deleted two extra spaces between words. Corrected Chapter 7 & 8 Titles.
91	Subsection 10.2.1.3, page 10.2-2, Turbine Control Valve, Load Maneuvering Capability	TCV: 2 nd Paragraph, last sentence, moved the word “fast from in front of ‘control valve’ to after ‘control valve’ as editorial correction. LMC: Deleted first and forth paragraphs to reflect composite design specification change made to Chapter 3 per the Design Review Team.
92	Global to all Chapter 10.	Change ESBWR reference plant to “ESBWR Standard Plant” as a clarification within all DCD chapters.

93	Global to all Chapter 10 and 10A.	Spelling corrections for capital letters (proper nouns).
94	Subsection 10.2.2.2, page 10.2-5, Bulk Hydrogen Storage, 4 th , 5 th , and 6 th paragraph.	Rewritten to clarify design configuration, Reference 10.2-2, effects to structures due to hydrogen detonation/combustion, and reference applicable codes and standards required for design and construction of bulk hydrogen storage.
95	Subsection 10.3.6	Corrected to say "...that are within the Reactor Coolant Pressure Boundary are addressed in Section 5.2."
96	Subsection 10.4.2.5.2, 1 st paragraph.	Changed TBCE to "PRMS", since the Process Radiation Monitor System monitors radiation from the air ejectors, not the TBCE. Editorial correction.
97	Subsection 10.4.3.3, page 10.4-9, 1 st paragraph.	Change the reference (Subsection 12.2) to "(Subsection 11.3)" since the DCD Chapter 11, Radioactive Waste Management, Section 11.3, Gaseous Waste Management System, Subsection 11.3.1, Design Bases, describes the operation of the OGS for holdup of the gases from the main condenser.
98	Subsection 10.4.4.2.3, page 10.4-12, 5 th and 6 th paragraphs.	Added detail provided in 8 th paragraph and clarified reference to Chapter 3 to "Section 3.2".
99	Section 10A.1, page 10A-2, Summary Description, 5 th Paragraph.	Editorial Correction, deleted last sentence. Last sentence redundant with the object of Chapter 10A and not required.
100	Section 10A.1, page 10A-2, Summary Description, 8 th Paragraph & 12 Paragraph.	Delete the first sentence. Reason: Same as reference design. Add details to 12 th paragraph to show difference between TB design shown in 10A and required TB design.
101	Subsection 10A.2.2.2, page 10A-13, Control and Design System.	Deleted third paragraph since SDD references are not part of the DCD nor required to be referenced.
102	Subsection 10A.4.7.1, page 10a-36, #(3).	Editorial clarification: Added 'rated' in front of power operation to clarify difference to part load operation referred to later in the item.
103	Subsection 10A.4.7.2.1, page 10A-36, 2 nd paragraph.	Editorial details added for clarification to correct FW pump operation as normally 3 operating and the fourth started as a standby to be similar to condensate pump operation.
104	Subsection 10.2.1.2, (2)&(4), page 10.2-1.	Removed space between T & G (2). Rewritten for clarity(4).

105	Subsection 10.2.2.1, 3 rd para., page 10.2-2 and 4 th para., page 10.2-3	Grammar clarity: Added “then” in 3 rd sentence, 3 rd paragraph and “carbon dioxide” in front of and “()” around CO ₂ .
106	Subsection 10.2.6, References, page 10.2-13.	Added new reference: “10.2-2 EPRI NP-5283-SR-A, Guidelines for Permanent BWR Hydrogen Water Chemistry Installations – 1987 Revision”.
107	Subsection 10.4.2.5, page 10.4-7.	Grammar, changed is to “are”.
108	Subsection 10.4.4.2.2, 3 rd paragraph, page 10.4-12.	First sentence grammar correction.
109	Subsection 10.4.5.2.3, System Operation, pages 10.4-14 and 15.	Grammar corrections in first and second paragraphs.
110	Subsection 10.4.6.5, 1 st paragraph, page 10.4-20.	Typo, punctuation.
111	Subsection 10.4.7.2.2, page 4-24.	Grammar, replace ‘above’ with “before”. Replace feed with “FW” in multiple places. Spell out (NPSH) “net positive suction head” first time used.
112	Section 10A, Alternative Design For Steam And Power Conversion System, Through the Section.	Global typo, spacing, punctuation and grammar changes have been made that do not change the intent of the Section and are not listed above.
113	Subsection 10.4.4.2.1, 2 nd Paragraph.	Delete the 2 nd paragraph. It is a duplicate of Subsection 10.4.4.2.2, 2 nd paragraph.
114	Subsection 10.4.10.2	Add: “(See Subsection 10.4.4.2.2).
115	Subsection 10.4.10.4	The five items listed within Subsection 10.4.5.7.2 have been referenced under Subsection 10.4.10.4 as COL information.
116	Subsection 10.4.5.7.2	Reference added, “(See Subsection 10.4.10.4 COL Information).
117	Subsection 10A.2.3.1	Added reference to “see Subsection 10A.2.5.1”.
118	Subsection 10A.2.5.1	Added cross reference from COL Information to “Subsection 10A.2.3.1”.
119	Abbreviations and Acronyms, throughout	Corrected spelling, punctuation, alphabetic order, or added as required, etc, minor changes.

120	Subsection 10.2.4, page 10.2-12.	Corrected non safety-related to.”nonsafety-related”.
121	Subsection 10.4.7.1, (2), page 10.4-21.	Changed the wording, “up to 135%” to “at least 135%” to reflect the FW pump 45% required run out flow within the ITAAC and FW design bases.
122	Subsection 10.4.7.2.1, 5 th paragraph, last sentence.	Re-phrased sentence to correct tense mismatch/minor grammar correction.
123	Subsection 10.4.10.3, page 10.4-27.	Added reference to Subsection 10.4.3.2.1.
124	Figure 10.4-3, page 10.4-27.	Capitalization in title.
125	Section 10A.2.2.1, page 10A-9, second paragraph.	Deleted “fast” from closure description of the Turbine Main Stop Valve since closure detection of the stop valves is position alone and not affected by speed of the closure.
126	Figure 10.4-2, Page 10.4-36	Deleted the pipe from RWCU/SDC to the tank, the tank and the pump and valves that feed the feedwater storage tank. Reason: The Design Review Report, RPV External Heating Using Feedwater” found in eDRF 0000-0035-5724, describes the RWCU/SDC overboard path as returning to the main condenser, not the feedwater storage tank as incorrectly shown in R-0.
127	Subsection 10.3.2.1	Replace the final paragraph to read “The allowable MSIV leakage is required to be ≤ the value used in the Section 15.4 Main Steamline Break Accident Outside Containment analysis.”
128	Subsection 10.3.7.2	Delete the subsection, because the change to Subsection 10.3.2.1 makes the statement out-of-date. Therefore, previous Subsection 10.3.7.3 becomes Rev. 1 10.3.7.2.
129	Subsection 10.3.8	Clarified the Reference 10.3-1.
130	Front Cover and footers of affected pages	Changed the sensitive material notice to read : “Security-Related Information - Withhold Under 10 CFR 2.390” and “Security-Related Information - Withheld Under 10 CFR 2.390” for the sensitive and public files, respectively.