

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
1	Abbreviations And Acronyms List	Updated the “Abbreviations And Acronyms List”.
2	Global change	Changed the word “polisher” and “polishers” to “demineralizer” or “demineralizers” to correct equipment or system description.
3	S10.1, 3 rd para., 1 st sent.	Added the following words at the beginning of the sentence: “At normal reactor power steam” to clarify meaning or intent (semantics).
4	S10.1, 2 nd para., 1 st sent.	Deleted the word “the” from before the word “main”; replaced the words “air removal” with “evacuation” to correct grammatical or syntax error.
5	S10.1, 3 rd para., 3 rd sent. and 4 th sent.	Inserted the word “and” after “separator”, replaced “reheater” with “reheaters”. Deleted the word “drains” and changed “reheater” to “reheaters”. Changed the ending of the sentence after “reheaters” to read: “drain to the high pressure feedwater heaters.” Started a new sentence beginning with “The drains.” These changes were made to clarify the text.
6	S10.1, 3 rd para., New 4 th sent.	Deleted the word “two” and changed “are drained” to “cascade”. These changes were made to incorporate design details.
7	S10.1, 3 rd para., 6 th sent.	Replaced “are cascaded” with “cascade” to incorporate design details.
8	S10.1, 4 th para., 2 nd sent.	Replaced “condenser” with “condenser(s)” in three instances and deleted the words “recombiner” after “gas” and “storage tank” at the end of the sentence to allow flexibility in site-specific details.
9	S10.1, 4 th para., 3 rd sent.	Added the words “subsystem” after the words “feedwater heaters” to correct equipment or system description.
10	S10.1, 5 th para., 2 nd sent.	Deleted the words “based on the ESBWR Standard Plant information described in Subsection 10.1.2.1” to clarify the text.
11	S10.1, 6 th para., 1 st sent.	Deleted the words “100% of the rated steam flow” and replaced with “full load rejection capability” to clarify meaning or intent (semantics).
12	S10.1, 8 th para., 1 st sent.	Replaced the words “sized for” with “designed to support” and deleted the words “with turbine valves wide open” to clarify meaning or intent (semantics).

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13	S10.1, 11 th para., 1 st sent.	Replaced the word “separators” with “separator reheaters” and “ejector” with “ejectors” to correct equipment or system description.
14	S10.1, 12 th para., 1 st sent.	Inserted the word “approximate” before “rated” to allow flexibility in site-specific details. Replaced “energy levels” with “pressures and temperatures” to clarify the text.
15	S10.1, 12 th para., new 2 nd sentence	Added the following new sentence: “These represent the reference cycle; actual values can vary slightly.” This change was made to allow flexibility in site-specific details.
16	S10.1, 14 th para., 1 st sent.	Inserted the word “and” after the word “steam” and replaced the words “condensate system” with “Condensate and Feedwater System (C&FS)”. These changes were made to correct equipment or system description.
17	S10.1, 14 th para., 2 nd sent.	Removed the word “recorders” from after the word “computer” to incorporate design details.
18	S10.1, 15 th para., 1 st sent.	Deleted the word “the” from before “main” in two instances. These changes were made to correct grammatical or syntax error.
19	S10.1, 15 th para., 2 nd sent.	Deleted this sentence in its entirety to make the section equal in detail to other DCD chapters and sections. While the statement is true, it provides unnecessary design detail which exceeds the level of detail provided for similar equipment.
20	S10.1.2.1, subsection	Deleted the subsection “Design Features and Performance Characteristics of the Steam and Power Conversion System” in its entirety and replaced it with the word “None” because the COL item is incorporated into the DCD text.
21	T10.1-1, 2 nd col., 1 st line	Added the words “Standard Plant” before “Value” to correspond with other DCD chapters and sections.
22	T10.1-1, 4 th line	Removed “Design NSSS power, (MWt)” line and values in its entirety to allow flexibility in site-specific details.
23	T10.1-1, 1 st col., 5 th line	Changed the word “outlet” to “dome” to incorporate design details.
24	T10.1-1, 2 nd col., 6 th line	Added parenthesis to “Design” to clarify text.
25	T10.1-1, 2 nd col., 6 th line	Deleted the tilde (~) from the value to incorporate design details.
26	T10.1-1, 2 nd col., 7 th line	Deleted the tilde (~) from the value to incorporate design details.

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27	T10.1-1, 2 nd col., 8 th line	Deleted the tilde (~) from the value to incorporate design details.
28	T10.1-1, 2 nd col, 10 th line	Replaced “Estimated 1550 – 1652” with “1605” to incorporate design details.
29	T10.1-1, 2 nd col, 13 th line	Replaced the word “bucket” with the word “blade” to correspond with other DCD chapters and sections.
30	T10.1-1, 2 nd col, 14 th line	Deleted the tilde (~) from the value to incorporate design details.
31	T10.1-1, 2 nd col, 16 th line	Deleted the value “2 or” to incorporate design details.
32	T10.1-1, 2 nd col, 21 st line	Deleted the value “~ 2941 (10 ¹⁰)” and replaced it with the words “3057 (10.43x10 ⁹)” to allow flexibility in site-specific details.
33	T10.1-1, 1 st col, 22 nd line	Deleted the “s” (seconds) and replaced it with “hr” (hours) to correspond with other DCD chapters and sections.
34	T10.1-1, 2 nd col, 22 nd line	Deleted the value “~ 42.5 (64.4x10 ¹⁰)” and replaced it with the value “152,000 (671,000)” to allow flexibility in site-specific details.
35	T10.1-1, 2 nd col, 23 rd line	Deleted the tilde (~) from the value to incorporate design details.
36	T10.1-1, 2 nd col, 25 th line	Added the words “(3 Normally Operating)” after the “4” to incorporate design details.
37	T10.1-1, 2 nd col, 27 th line	Deleted the word “driven” after “Motor” to clarify the text.
38	T10.1-1, 1 st col, 28 th line	Changed “m ³ /s (gpm)” to “kg/hr” to correspond with other DCD chapters and sections.
39	T10.1-1, 2 nd col, 28 th line	Changed the value “~0.6(9300)” to “5.8x10 ⁶ (12.8x10 ⁶)” to incorporate design details.
40	T10.1-1, 29 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
41	T10.1-1, 30 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
42	T10.1-1, 2 nd col, 31 st line	Added an asterisk (*) after “Heaters” to allow flexibility in site-specific details.
43	T10.1-1, 32 nd line	This line was deleted in its entirety to allow flexibility in site-specific details.
44	T10.1-1, 33 rd line	This line was deleted in its entirety to allow flexibility in site-specific details.

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45	T10.1-1, 34 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
46	T10.1-1, 35 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
47	T10.1-1, 1 st col, 36 th line	Deleted the alpha list number “b” to clarify the text.
48	T10.1-1, 2 nd col, 38 th line	Replaced the value “52.4 (7.6)” with “55 (8)” to incorporate design details.
49	T10.1-1, 39 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
50	T10.1-1, 1 st col, 40 th line	Deleted the alpha list number “c” to clarify the text.
51	T10.1-1, 2 nd col, 42 nd line	Replaced the value “108.2 (15.7)” with “110 (16)” to incorporate design details.
52	T10.1-1, 43 rd line	This line was deleted in its entirety to allow flexibility in site-specific details.
53	T10.1-1, 1 st col, 44 th line	Deleted the alpha list number “d” to clarify the text.
54	T10.1-1, 2 nd col, 46 th line	Replaced the value “213.7 (31)” with “221 (32)” to incorporate design details.
55	T10.1-1, 47 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
56	T10.1-1, 1 st col, 48 th line	Deleted the alpha list number “e” to clarify the text.
57	T10.1-1, 2 nd col, 50 th line	Replaced the value “395.7 (57.4)” with “407 (59)” to incorporate design details.
58	T10.1-1, 52 nd line	This line was deleted in its entirety to allow flexibility in site-specific details.
59	T10.1-1, 53 rd line	This line was deleted in its entirety to allow flexibility in site-specific details.
60	T10.1-1, 54 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
61	T10.1-1, 1 st col, 55 th line	Deleted the alpha list number “f” to clarify the text.
62	T10.1-1, 2 nd col, 56 th line	Replaced the value “1200 (174.1)” with “1282 (186)” to incorporate design details.
63	T10.1-1, 57 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
64	T10.1-1, 1 st col, 58 th line	Deleted the alpha list number “g” to clarify the text.

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65	T10.1-1, 1 st col, 60 th line	Changed the value “2256.7 (174.1)” to “2255 (327)” to incorporate design details.
66	T10.1-1, 1 st col, 61 st line	Deleted the alpha list number “h” to clarify the text.
67	T10.1-1, 1 st col, 63 rd line	Replaced “Duty per Shell, MW (Mbtu/hr)” with “Number per stage (Used for Power Maneuvering only)” to incorporate design details for an Engineering Change Authorization.
68	T10.1-1, 1 st col, 63 rd line,	Moved the words “(booster and main pump)” to the first column after “Number of pumps” to clarify the text.
69	T10.1-1, 2 nd col, 63 rd line	Added the words “(3 Normally Operating)” to incorporate design details.
70	T10.1-1, 2 nd col, 65 th line	Deleted the word “driven” after “Motor” to clarify the text.
71	T10.1-1, 2 nd col, 66 th line	Changed “m ³ /s (gpm)” to “Kg/hr” to correspond with other DCD chapters and sections.
72	T10.1-1, 2 nd col, 66 th line	Changed the value “~0.9x10 ⁶ (14.3x10 ³)” to “8.8x10 ⁶ (19.3x10 ⁶)” to incorporate design details.
73	T10.1-1, 67 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
74	T10.1-1, 68 th line	This line was deleted in its entirety to allow flexibility in site-specific details.
75	T10.1-1, 1 st asterisk (*)	Replaced the words “Feedwater heater performance” with “Reference Value”, deleted the value “100%”, and added the following new sentence: “These are representative values for the reference cycle; actual values can vary slightly.” These changes were made to allow flexibility in site-specific details.
76	T10.1-1, 2 nd asterisk (**)	Second asterisk (*) and its text was deleted in its entirety to incorporate design details.
77	F10.1-1	This figure was replaced in its entirety to allow flexibility in site-specific details.
78	F10.1-2	This figure was replaced in its entirety to allow flexibility in site-specific details.
79	F10.1-3	This figure was replaced in its entirety to allow flexibility in site-specific details.
80	S10.2.1, 1 st para., 1 st sent.	Created two sentences. Added a period (.) after the word “missiles”; started a new sentence and replaced “by” with “It”. Replaced the word “providing” with “provides”. These changes were made to clarify the text.

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81	S10.2.1, 1 st para., new 3 rd sent.	Inserted a new third (last) sentence “The probability of Turbine Generator missiles generation, assuming the recommended inspection and test frequencies, is less than 1×10^{-5} per year.” This change was made to incorporate design details.
82	S10.2.1.1, 1 st para., 1 st sent.	Replaced the word “nor” with “or” to correct grammatical or syntax error.
83	S10.2.1.2, 1 st bullet, 3 rd sent.	Deleted this sentence in its entirety to incorporate design details.
84	S10.2.1.2, 4 th bullet, 1 st sent.	Replaced “emergency” with “and”. Deleted “and several other trip circuits.” These changes were made to clarify the text.
85	S10.2.1.2, 5 th bullet, 1 st sent.	Deleted the words “design Normal Overspeed (NOS) or” ... At the end of the sentence deleted the word “speed” to correct grammatical or syntax error.
86	S10.2.1.2, 6 th bullet, 1 st sent.	Deleted the first sentence to clarify meaning or intent (semantics).
87	S10.2.1.2, 7 th bullet, 1 st sent.	Replaced “reactor power control system” with “main control room”; after “to” added “prompt a”, changed “reduce power” to “reduction in power”, and replaced “on-line capacity” with “auxiliary systems”. These changes were made to clarify meaning or intent (semantics).
88	S10.2.1.3, 1 st para., 1 st sent.	Changed the words from “stop and control valves and reheat combined steam stop and intermediate valves” to “stop, control valves, intermediate valves and intercept valves”. Replaced the word “set” with “excessive”. These changes were made to correct equipment or system description.
89	S10.2.1.3, 1 st para., 2 nd sent.	Changed to new second sentence “The Steam Bypass and Pressure Control System (SB&PC) protects....” This change was made to clarify the text.
90	S10.2.1.3, 1 st para., 3 rd sent.	Replaced the words “NOS or EOS in the event of a TG trip signal” to “the unit exceeding EOS or an abnormal pressure surge in the event of a TG trip signal or near full load rejection”. This change was made to clarify meaning or intent (semantics).
91	S10.2.1.3.2, 1 st para., 1 st sent.	Added the word “the” before the words “turbine inlet” to correct grammatical or syntax error.

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92	S10.2.1.3.2, 3 rd para., 1 st sent.	Changed "...times required not greater than 7 seconds" to "...times required" to allow flexibility in site-specific details.
93	S.2.2.1, 2 nd para., 2 nd sent.	Changed the words "...has stage(s) of steam extraction as required." to "has extraction points for reheater reheating steam and high pressure feedwater heating." This change was made to allow flexibility in site-specific details.
94	S10.2.2.1, 3 rd para., 3 rd sent.	Replaced this sentence in its entirety to allow flexibility in site-specific details.
95	S10.2.2.1, 4 th para., 1 st sent.	Replaced the word "stator" with "armature winding". Added a hyphen between the words "hydrogen-cooled" to correct grammatical or syntax error.
96	S10.2.2.1, 5 th para., 1 st sent.	Removed the hyphen from between the words "turbine generator" to correct equipment or system description.. Inserted the acronym "SB&PC". These changes were made to correct equipment or system description.
97	S10.2.2.1, 5 th para., 2 nd sent.	Deleted the word "combine" before "intermediate" and added the words "stop and intercept" before the word "valves". Deleted the acronym "(CIVs)" at the end of the sentence. These changes were made to correct equipment or system description.
98	S10.2.2.1, 6 th para., 1 st sent.	Changed the word "turbine" to "Turbine Generator" and replaced the acronym "TCS" with "TGCS". Added the words "turbine hydraulic system". Changed the words "and carbon dioxide (CO ₂)" to "gas control"; deleted "-ing" at the end of "sealing" and inserted the words "MSR reheater heating steam system" before "and". These changes were made to correct equipment or system description
99	S10.2.2.1, 7 th para., 1 st sent.	Inserted "high energy" between the words "associated piping" to create "associated high energy piping to clarify meaning or intent (semantics).
100	S10.2.2.1, 7 th para., 2 nd sent.	Replaced the word "local" with "postulated". Replaced the word "will" to "does". Replaced the words "safety-related equipment" with the words "essential systems or components as defined in BTP SPLB 3-1." These changes were made to clarify meaning or intent (semantics).
101	S10.2.2.2, 1 st para., 2 nd sent.	After the words "Manufacturer's Standards" added the following words "and applicable state required design codes and standards". This change was made to incorporate design details.

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102	S10.2.2.2.1, 1 st para., 2 nd sent.	Replaced the word “emergency” to “trip” to correct equipment or system description.
103	S10.2.2.2.1, 2 nd para., 1 st sent.	Added “hydraulically” after “are”, replaced “emergency trip, fast acting valve”, with “turbine overspeed protection system in response to a turbine trip signal”, and replaced “small” with “test”; insered “and a fast acting solenoid valve” before “for” and inserted “periodic” before “testing”. These changes were made to incorporate design details.
104	S10.2.2.2.1, 2 nd para., 2 nd sent.	Deleted the word “totally” from before “unbalanced” to clarify meaning or intent (semantics).
105	S10.2.2.2.1, 3 rd para., 1 st sent.	Removed the words “permanent” and added the word “limit”; deleted the word “prevent” and replaced the word “matter” with “material” to clarify meaning or intent (semantics).
106	S10.2.2.2.1, 4 th para., 1 st sent.	Inserted the word “hydraulically” before the word “operated” to incorporate design details.
107	S10.2.2.2.1, 4 th para., 3 rd sent.	Deleted the words “single acting, spring-closed” to allow flexibility in site-specific details.
108	S10.2.2.2.2, 1 st para., 4 th and 5 th sentences	Joined the 4 th and 5 th sentences by deleting “Most of the exhaust steam” and replacing with the word “and”. Deleted the words “but part of it is diverted and supplies the next to last stage of feedwater heating and SJAEs.” Replaced the word “turbine” with ”HP casing”. These changes were made to incorporate design details.
109	S10.2.2.2.3, 1 st para., 5 th sent.	Replaced the words “moisture separator drain tank(s) and from there to the required” with “the appropriate” to allow flexibility in site-specific details.
110	S10.2.2.2.3, 1 st para., 7 th sent.	Deleted the word “combined” before “intermediate” and inserted the words “stop and intercept” before “valves; deleted the acronym “(CIVs)”. These changes were made to correct equipment or system description.
111	S10.2.2.2.3, 1 st para., 8 th sent.	Added the word “relief” after the word “Safety” to clarify meaning or intent (semantics).
112	S10.2.2.2.4, Title	Changed the title from “Combine Intermediate Valves” to “Intermediate Stop and Intercept Valves” to correct equipment or system description.
113	S10.2.2.2.4, 1 st para.	This paragraph was rewritten in its entirety based on input from the turbine manufacturer.

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114	S10.2.2.2.4, 2 nd para., 1 st , 2 nd , 4 th and 6 th sent.	Deleted these sentences in their entirety to allow flexibility in site-specific details.
115	S10.2.2.2.4, 2 nd para., 3 rd sent.	Replaced the word “valve” with “valves”, “closes” with “close” and “throttles” with “throttle” to correct grammatical or syntax error. Deleted the words “and maintain synchronization” to incorporate design details.
116	S10.2.2.2.4, 2 nd para., 2 nd sent.	Replaced the words “only if the intercept valves fail to operate properly” with “on a turbine trip” to incorporate design details.
117	S10.2.2.2.4, 2 nd para., 7 th sent.	Deleted the word “valve” after the word “stop” and change the word “valve” after “intercept” to “valves” to correct grammatical or syntax error.
118	S10.2.2.2.5, 1 st para., 1 st sent.	Replaced the acronym “CIVs” with the words “hot reheat lines” to correct equipment or system description.
119	S10.2.2.2.5, 1 st para., 2 nd sent.	Replaced the word “buckets” with the word “blades” and replaced “is expanded” with “expands” to correspond with other DCD chapters and sections.
120	S10.2.2.2.6, 1 st para., 1 st sent.	Replaced the word “could” with “can” to correct grammatical or syntax error.
121	S10.2.2.2.6, 1 st para., 2 nd sent.	In two instances, changed the word “could” with “can” to correct grammatical or syntax error.
122	S10.2.2.2.6, 1 st para., 3 rd sent.	Inserted the word “selected” before extraction and deleted the words “if found necessary per Turbine Blade Design (see Subsection 10.2.5.4 for detailed information).” Inserted the words “(See Subsection 10.2.2.4)” at the end of the sentence. These changes were made to incorporate design details.
123	S10.2.2.2.6, 1 st para., 3 rd sent.	Changed the word “over speeding” to “overspeeding” to correspond with other DCD chapters and sections.
124	S10.2.2.2.7, 1 st para., 1 st sent.	Replaced the word “stator” with the words “armature winding”... Added hyphen between “hydrogen-cooled” to correct grammatical or syntax error.
125	S10.2.2.2.7, 2 nd para., 1 st sent.	Replaced the words “a one-piece forging” with “forged components” to incorporate design details and to allow flexibility in site-specific details.
126	S10.2.2.2.8, Title	Replaced the title from “Bulk Hydrogen and CO ₂ System” to “Hydrogen Gas Control System” to correct equipment or system description.

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127	S10.2.2.2.8, 1 st para., 1 st sent.	Replaced the words “bulk hydrogen and CO ₂ ” with “Hydrogen Gas Control System (HGCS)” to correct equipment or system description.
128	S10.2.2.2.8, 4 th para., 2 nd sent.	Deleted second sentence in its entirety: “With respect to the portions of the guidelines involving hydrogen that do not deal with the Hydrogen Water Chemistry (HWC) system see Subsection 9.3.9.” This change was made to correspond with other DCD chapters and sections.
129	S10.2.2.2.8, 4 th para., 3 rd sent.	Deleted the words “will result” to clarify the text.
130	S10.2.2.2.8, 4 th para., 6 th sent.	Changed the words “shall be” to “are” to correspond with other DCD chapters and sections.
131	S10.2.2.3, 1 st para., 1 st sent.	Replaced the words “and CIVs” with “intermediate stop valves and intercept valves” to correct equipment or system description.
132	S10.2.2.3, 1 st para., 2 nd sent.	Replaced the words “Turbine Control System (TCS)” with “Turbine Generator Control System (TGCS)”. Deleted the word “four” from before “main”. These changes were made to correct equipment or system description.
133	S10.2.2.3, 1 st para., 3 rd sent.	Replaced the acronym “(TCS)” with “(TGCS)” to correct equipment or system description.
134	S10.2.2.3, 1 st para., 4 th sent.	Replaced the acronym “(TCS)” with “(TGCS)” to correct equipment or system description. Deleted the word “four” before the word “main” and “four main” before the word “control” to allow flexibility in site-specific details. Replaced the words “and six CIVs” with “intermediate stop valves and intercept valves” to correct equipment or system description
135	S10.2.2.4, section	Replaced this section in its entirety to incorporate input from the Turbine Manufacturer.
136	S10.2.2.5, 1 st para., 1 st sent.	Replaced the acronym “CIVs” with the words “intermediate stop and intercept valves” to correct equipment or system description.
137	S10.2.2.5, 7 th bullet	Removed bullet #8 in its entirety to clarify the text.
138	S10.2.2.5, 8 th bullet	Replaced the words “Manual at” with “Emergency trip at” to correct equipment or system description.
139	S10.2.2.5, 9 th bullet	Added the words “(if runback fails)” at the end of the bullet to incorporate design details.
140	S102.2.5, 11 th bullet	Replaced the word “Any” with “Selected” and the word “trip” with “trips” to clarify meaning or intent (semantics).

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141	S10.2.2.5, 14 th bullet	Replaced the word “Primary” with “Normal Speed Control” to correct equipment or system description.
142	S10.2.2.6, 1 st para., 3 rd bullet	Deleted the words “and spray pressure” at the end of the bullet to incorporate design details.
143	S10.2.2.6, 1 st para., 13 th bullet	Deleted the word “air” after the word “Exciter” to incorporate design details
144	S10.2.2.5, 2 nd para., 1 st sent.	Replaced “2/3” with “two-out-of-three” to correct grammatical or syntax error.
145	S10.2.2.5, 3 rd para., 1 st sent.	Replaced the word “combined intermediate” with “intermediate stop and intercept” to correct equipment or system description.
146	S10.2.2.7, 1 st para., 1 st sent.	Replaced the word “Normal” with “Primary”, the words “can be” with “are” and “on the TCS operator interface panel” with “in the Main Control Room” to correspond with other DCD chapters and sections.
147	S10.2.2.7, 1 st para., 2 nd sent.	Removed the word “over” before the word “speed” and changed “condition” to “conditions” to correct grammatical or syntax error.
148	S10.2.2.7, 1 st para., new 3 rd sent.	Added the following new sentence to the end of this paragraph: “In some cases, operation of the overspeed protection devices can be tested just prior to shutdown, thus negating the need to test overspeed protection devices during subsequent startup if no maintenance is performed affecting the overspeed trip circuits and devices.” This change was made to allow flexibility in site-specific details.
149	S10.2.2.7, 2 nd para., 1 st sent.	Replaced the words “or as per” with “at intervals defined in” and “reheat” with “intermediate”. Changed “intermediate” to “intercept” after the word “one”. Deleted the word “reheat” after the word “one”. These changes were made to clarify meaning or intent (semantics).
150	S10.2.2.7, 2 nd para. 2 nd sent.	Replaced the words “would be” with “are” before “dismantled and inspected” and deleted the words “should be” before “checked” to correspond with other DCD chapters and sections.
151	S10.2.2.7, 2 nd para. 3 rd sent.	Replaced the words “will be” with “are” before “checked for proper clearance” to correspond with other DCD chapters and sections.

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152	S10.2.2.7, 3 rd para., 1 st sent.	Added the words “reheat intercept and reheat stop valves” before the words “are exercised” to incorporate design details. Added the words “(or as required by the missile probability analysis)” after “each calendar quarter” to ensure the valve test frequency supports the missile probability analysis while maintaining operational flexibility. Deleted the words “fully OPEN and” from before “fully CLOSED” to ensure the focus is on the protective function of closing; opening is not required for overspeed protection. RAI 10.2-19 response references this sentence.
153	S10.2.2.7, 3 rd para., 2nd sent. (new)	Added the following new sentence to the end of paragraph #3: “This test also verifies operation of the fast close function of each main steam stop, turbine control, reheat intercept and reheat stop valve during the last few percent of valve stem travel.” This change was made to incorporate design details.

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154	S10.2.3, entire section	<p>Replaced these sections in their entirety to incorporate input from the turbine manufacturer. The following summarizes changes related to previous RAI responses.</p> <p>S10.2.3.1 was rewritten to include the Turbine Manufacturers standards and methods for integral rotor designs in addition to the shrunk on disc design specifications provided in SRP 10.2.3. The reference to ASTM E208 that was added per RAI 10.2-3 has now been removed and the statement “The determination of FATT is used in lieu of nil-ductility transition temperature methods” has been added. SRP 10.2.3 allows use of NDT in lieu of FATT as an option; we are choosing not to use this option. Provisions for a material analysis are now provided in DCD Tier 1, section 2.11.4 ITAAC.</p> <p>COL item 10.2.5.1 (LP turbine disk fracture toughness) that was referenced in S10.2.3.2 is now addressed in Tier 1, section 2.11.4 ITAAC. The last paragraph of S10.2.3.3 was deleted and discussion of warm-up time was included in the second paragraph. Warm-up time consideration was added per RAI 10.2-6.</p> <p>COL item 10.2.5.2 (overspeed basis) referenced in RAI 10.2-8 has been incorporated into the text of section 10.2.3.4.</p> <p>COL item 10.2.5.5 (Turbine general design description and torsional vibration analysis) referenced in RAI 10.2-1 (A) and RAI 10.2-10 (A) response is now addressed in section 10.2.3.4.</p> <p>COL item 10.2.5.3 (turbine in-service test and inspection) referenced in RAI 10.2-1 (B), RAI 10.2-2, RAI 10.2-13, and RAI 10.2-14 responses is now addressed in Tier 1, section 2.11.4 ITAAC.</p> <p>S10.2.3.1 through S10.2.3.7 are referenced in RAIs 10.2-1, 10.2-2, 10.2-3, 10.2-4, 10.2-5, 10.2-6, 10.2-7, 10.2-8, 10.2-10, 10.2-11, 10.2-12, 10.2-13, 10.2-14, 10.2-15 and 10.2-16.</p>
155	S10.2.4, 4 th para., 1 st sent.	<p>Replaced the words “Unrestrained” with “Uncontrolled release of” and “has been” with “is”; added “(see Subsection 10.2.2.2.6)” to the end of the sentence to clarify meaning or intent (semantics).</p>
156	S10.2.4, 8 th para., 1 st sent.	<p>Replaced “will be” with “are” to correspond with other DCD chapters and sections.</p>
157	S10.2.4, 10 th and 11 th para.	<p>Combined these two paragraphs to clarify the text.</p>

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Item	Location	Description of Change
158	S10.2.4, 11 th para., 1 st sent.	Changed the words “is” to “are”, “system” to “systems” and “component” to “components”. Replaced the words “safety-related mechanical equipment in” with “essential systems or components (as defined in BTP SPLB 3-1), in” and deleted the word “because” after the word “and”. These changes were made to clarify meaning or intent (semantics).
159	S10.2.4, 12 th para., 1 st sent.	Removed the word “respectively”, replaced the words “assure that” with “support” and deleted the words “are achieved”. Replaced the words “spurious trips are avoided” with the words “avoid spurious trips”. These changes were made to clarify meaning or intent (semantics).
160	S10.2.4, new 13 th , 14 th and 15 th para.	Inserted three new paragraphs to incorporate design details.
161	S10.2.5.1, title and subsection	The original 10.2.5.1 COL item titled “Low Pressure Turbine Disk Fracture Toughness” was deleted and replaced with “Turbine Missile Probability Analysis” due to renumbering. The original COL item in 10.2.5.1 is moved to DCD Tier 1 as an ITAAC in Section 2.11.4. The original COL item was referenced in RAIs 10.2-2 and 10.2-6.
162	S10.2.5.2	The design intent related to this COL item was incorporated into the DCD text and moved to DCD Section 10.2.3.4. The original COL item was referenced in RAIs 10.2-8, 10.2-9 and 10.2-18.
163	S10.2.5.3	The original COL item in 10.2.5.3 was incorporated into the DCD text and moved to DCD Tier 1 as an ITAAC in Section 2.11.4. The original COL item was referenced in RAI 10.2-1.
164	S10.2.5.4	The original COL item in 10.2.5.4 was incorporated into the DCD text and moved to DCD Tier 2, Subsection 10.2.2.2.6, “Extraction Non-return Valves.”
165	S10.2.5.5, subsection	The original COL item in 10.2.5.5 was incorporated into the DCD text and moved to DCD Tier 2, Subsection 10.2.3.4, “Turbine Design.” The original COL item was referenced in RAIs 10.2-1 and 10.2-10.
166	S10.2.6, New Reference	Added new reference 10.2-3 for COL Holder item for missile probability analysis.

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Item	Location	Description of Change
167	S10.2.2.7, 5 th para., 2 nd bullet	Removed the word “combined” from before “intermediate”. Inserted the words “stop and intercept” before the word “valves” and removed the acronym “(CIV)”. These changes were made to correct equipment of system description.
168	F10.2-1	This figure was replaced in its entirety to allow flexibility in site-specific details.
169	F10.2-2	This figure was replaced in its entirety to allow flexibility in site-specific details.
170	F10.2-3	This figure was replaced in its entirety to allow flexibility in site-specific details.
171	F10.2-4, Sheet 1, Title	This figure was replaced in its entirety and the title changed to “Hydrogen Gas Control System” to allow flexibility in site-specific details.
172	F10.2-4, Sheet 2	This figure was deleted in its entirety to allow flexibility in site-specific details.
173	S10.3, 1 st para., 1 st sent.	Removed the words “function of the” before “Turbine Main” and replaced the words “is to convey” to “conveys” to clarify the text.
174	S10.3.1.1, 1 st para., 1 st sent.	Added the word “to” after the word “designed” to clarify the text.
175	S10.3.1.1, 1 st para., #1 bullet	Deleted the word “To” and capitalized the word “Accommodate” to correct grammatical or syntax error.
176	S10.3.1.1, 1 st para., #2 bullet	Deleted the word “To” and capitalized the word “Provide” to correct grammatical or syntax error.
177	S10.3.1.1, List #4, 1 st sent.	Deleted the word “To” and capitalized the word “Accommodate” to correct grammatical or syntax error. Added the word “isolation” between “auxiliary” and “valve(s)” to clarify the text. Added the following after “valve(s)”: “on branch lines between the MSIVs and Main Turbine Stop Valves (excluding the fission product leakage path to the condenser)”. These changes were made to incorporate design details.
178	S10.3.1.1, 2 nd para., 2 nd sent.	Added the following at the end of the second sentence: “and turbine bypass valves”. This change was made to incorporate design details.

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Item	Location	Description of Change
179	S10.3.1.1, 3 rd para., 1 st sent.	Replaced the words “shall be” with “is” to correspond with other DCD chapters and sections. Changed “Non-safety” to “Nonsafety-related” to clarify meaning or intent (semantics).
180	S10.3.1.1, 4 th para., 1 st sent.	Deleted the words “safe shutdown earthquake” because the term had been defined in Section 10.2.1.1.
181	S10.3.1.1, new 5 th para.	<p>Added a new fifth paragraph. This change was made because the COL item is incorporated into the DCD text.</p> <p>This section is referenced in RAI 10.3-5 related to the MSIV fission product leakage path to the condenser. The following was added in response to the first part of this RAI:</p> <p>“The MSIV fission product leakage path to the main condenser is analyzed to demonstrate structural integrity under SSE loading conditions. The drain valve(s), that are required to change position to provide the MSIV leakage path to the main condenser are equipped with reliable power sources or designed to fail to the required position on loss of power or air. The drain valve(s) are periodically tested, as required, to ensure continued reliability.”</p> <p>The response to the second part of RAI 10.3-5 stated a new COL item would be established to complete a plant specific walk down and ensure periodic testing of the valves would be performed. The COL item has been deleted. The walkdown is now a requirement of Tier 1 section 2.11.1 ITAAC. The periodic testing requirement is incorporated into DCD section 10.3.1.1 text.</p>
182	S10.3.1.2, 1 st para., 1 st sent.	Deleted the word “system” after “Turbine Generator” to correct equipment or system description.
183	S10.3.2.1, 1 st para., 2 nd sent.	Replaced the word “restrain” with “restraint” to correct grammatical or syntax error.
184	S10.3.2.1, 1 st para., 2 nd sent.	Replaced the word “re-heaters” with the words “Moisture Separator Reheaters (MSRs)” and deleted the words “and the de-aerating section (if provided) of the main condenser” to correct equipment or system description.
185	S10.3.2.1, 3 rd para., 2 nd sent.	Replaced the words “Both sets of drains drain” with “The drain lines are routed” and replaced “and also” with “to” to correct grammatical or syntax error.

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Item	Location	Description of Change
186	S10.3.2.1, 3 rd para., 3 rd sent.	Reworked the sentence to read: “Orifice lines are provided around the valves to the main condenser to permit continuous” draining of the steam line low points.” This change was made to clarify the text.
187	S10.3.2.1, 3 rd para., 5 th sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
188	S10.3.2.1, 3 rd para., 6 th sent.	Deleted the words “To permit emptying the drain lines for maintenance” and re-started the sentence with “The drain lines”. Replaced the words “from the line low points” with “with low point drain valves to permit emptying”. Added the words “for maintenance” after “radwaste system”. These changes were made to clarify meaning or intent (semantics).
189	S10.3.2.1, 5 th para., 1 st sent.	Removed the “less than equal to” (\leq) sign and the parenthesis from “less than or equal to” to correct grammatical or syntax error. Added the words “(see Subsection 15.4.4.5.2.3)” at the end of the sentence to correspond with other DCD chapters and sections.
190	S10.3.2.2, new section	Created a new subsection titled “Component Description” to correct an error in electronic formatting.
191	S10.3.2.2, new section number	Renumbered subsection “10.3.2.2” to “10.3.2.3” to correspond with other DCD chapters and sections.
192	S10.3.2.3, 1 st para., 2 nd sent.	Deleted the words “the main” and “type”; inserted “High Pressure” before “HP” and deleted the word “extraction” from before “steam”. These changes were made to correct equipment or system description.
193	S10.3.2.3, 2 nd para., 1 st sent.	Replaced the words “when the” with “as” and “exceeds 15%” with “is increased” to clarify meaning or intent (semantics).
194	S10.3.2.2, 2 nd para., 2 nd sent.	Deleted the words “controlled by”, replaced “regulating” with “regulated” and replaced “valves to approximately 60% load range” with “at low power levels”. These changes were made to incorporate design details.
195	S10.3.3, 1 st para., 2 nd sent.	Added the words “relief valve discharge loads,” after the word “and” and at the end of the sentence added “and includes provisions to limit water entrainment”. These changes were made to clarify meaning or intent (semantics).

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Item	Location	Description of Change
196	S10.3.3, 1 st para., 3 rd sent.	Deleted the words “The COL Holder shall develop” and restarted the sentence with “Operating”. Removed the word “that” and “and relief valve discharge loads (see Subsection 10.3.7.1 for COL license information requirements)”. These changes were made because the COL item is incorporated into the DCD text.
197	S10.3.3, 2 nd para., 1 st sent.	Added the words “offsite” in front of “radiation” and deleted the words “to persons located offsite,” to clarify meaning or intent (semantics).
198	S10.3.4, 1 st para., 1 st sent.	Replaced the words “will be” with “are” to correspond with other DCD chapters and sections.
199	S10.3.4, 1 st para., 2 nd sent.	Replaced the words “will be” with “is” to correspond with other DCD chapters and sections.
200	S10.3.6.1, 1 st para.	Replaced this paragraph in its entirety to clarify meaning or intent (semantics).
201	S10.3.6.2, dashed list	Dashed list items changed to alpha list items to correspond with other DCD chapters and sections.
202	S10.3.6.2, list item “c”, 2 nd para.	Added the words “(see Subsection 5.2.3.4.2)” to the end of the sentence. to correspond with other DCD chapters and sections. This section is referenced in RAI 10.3-5. Welder qualification for areas with restricted physical and visual accessibility is discussed in subsection 5.2.3.4.2. A reference to subsection 5.2.3.4.2 was made in subsection 10.3.6.2 and the COL item in 10.3.7.2 is deleted.
203	S10.3.7, all subsections	Deleted all subsections 10.3.7.1 and 10.3.7.2 because the COL item was incorporated in DCD text and changed the section to read “None”. Deleted subsection 10.3.7.3 because the COL item was taken as an ITAAC, Tier 1, Section 2.11.1. The proposed COL item for the MSIV leakage path walkdown stated in the responses to RAI 3.2-42 and 10.3-10 has been implemented in Tier 1, section 2.11.1 ITAAC.
204	T10.3-1, Table Header, 2 nd column	Added the words “Standard Plant Value*” to the 2 nd column header to correspond with other DCD chapters and sections.
205	T10.3-1, 2 nd line, 1 st column	Added the value “(lb/hr)” after “kg/s” to incorporate design details.
206	T10.3-1, 2 nd line, 2 nd column	Changed from “~2432.61 (19.307)” to “2437 (19.3x10 ⁶)” to incorporate design details.

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Item	Location	Description of Change
207	T10.3-1, 6 th line, 2 nd column	Changed from “42.7 (1.68)” to “As Required per ASME III” to allow flexibility in site-specific details.
208	T10.3-1, Note added	Added the following text as a note: “Values shown for approximate rated operation. These are representative values for the standard plant; actual values will vary slightly.” This change was made to allow flexibility in site-specific details.
209	F10.3-1, Sheet 1	This sheet was replaced in its to allow flexibility in site-specific details.
210	F10.3-2, Sheet 1	This sheet was deleted in its and is provided in Figure 10.3-1.
211	F10.3-2, Sheet 2	This sheet was replaced in its entirety and is no longer sheet #2 to incorporate design details.
212	S10.4, 1 st para., 1 st sent.	At the end of the sentence, added the words “not described elsewhere in this chapter.” This change was made to clarify the text.
213	S10.4.1, 1 st para., 2 nd sent.	Replaced the word “it” with the words “the main condenser” and created a new sentence after “turbine exhaust steam” to clarify the text.
214	S10.4.1, 1 st para., new 3 rd sent.	New sentence created by removing “and” and adding “It performs the same functions for the” before “turbine bypass steam”. This change was made to clarify the text.
215	S10.4.1.1.1, 1 st para.	Replaced this paragraph in its entirety to incorporate design details and to clarify meaning or intent (semantics).
216	S10.4.1.1.1, new 2 nd para.	Added a new paragraph stating: “For evaluation against GDC 60, see “Subsection 3.1.6.1” to correspond with other DCD chapters and sections.
217	S10.4.1.1.2, bullet #2, 2 nd sent.	Deleted this sentence in its entirety because it did not provide a valid design basis for the main condenser.
218	S10.4.1.1.2, bullet #4, 1 st sent.	Added a space between the words “hold up” to correspond with other DCD chapters and sections.
219	S10.4.1.1.2, bullet #6, 1 st sent.	Replaced the entire bullet with the following: “The guidance provided in Reference 10.4-1 is considered in the condenser design.” This change was made to clarify the text.
220	S10.4.1.2.1, 1 st para., 1 st sent.	Replaced the word “Standard” with “Reference” to correspond with other DCD chapters and sections.

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Item	Location	Description of Change
221	S10.4.1.2.1, 1 st para., new 2 nd sent.	Added the following new sentence to the end of this paragraph: “Other site specific condenser designs may be considered.” This change was made to allow flexibility in site-specific details.
222	S10.4.1.2.1, 2 nd para., 2 nd sent.	Between the words “each shell”, inserted “standard design” and deleted the words “at least” to incorporate design details.
223	S10.4.1.2.1, 3 rd para., 2 nd sent.	Deleted the “A” and capitalized “Vertical”; replaced the word “plate” with “plate(s)” and changed “divides” to “divide”. These changes were made to correct grammatical or syntax error.
224	S10.4.1.2.1, 4 th para., 2 nd sent.	Deleted the sentence in its entirety to correspond with other DCD chapters and sections. And flooding analysis provided elsewhere in the DCD.
225	S10.4.1.2.1, 4 th para., 4 th sent.	Replaced the word “Two” with the words “In the standard plant design, the three” to incorporate design details.
226	S10.4.1.2.1, 4 th para., new sent.	At the end of this paragraph, the following new sentence was added: “For flooding evaluation, see Section 3.4.” This change was made to correspond with other DCD chapters and sections and flooding analysis provided elsewhere in the DCD.
227	S10.4.1.2.2, 1 st para., 1 st sent.	Replaced the words “provides general”, with “provides ESBWR standard plant”, replaced “are” with “is” and removed the words “and reference data” to correspond with other DCD chapters and sections.
228	S10.4.1.2.2, 1 st para., 2 nd sent.	Inserted the words “or alternate” after the words “(instead of series)” and deleted “because these have no effect on the Nuclear Island” to allow flexibility in site-specific details.
229	S10.4.1.2.3, 2 nd para., 3 rd bullet	Replaced the word “Turbine” with the words “Steam cycle” and “clean” with “vents and” to clarify meaning or intent (semantics).
230	S10.4.1.2.3, 2 nd para., 5 th bullet	Replaced the bullet in its entirety with “Condensate storage clean up feed and bleed.” This change was made to incorporate design details.
231	S10.4.1.2.3, 3 rd para., 2 nd sent.	Deleted the word “the” from before “gland”, added the words “sampling system” after “regulator,” and “and liquid” after “other steam” to incorporate design details.
232	S10.4.1.2.3, 3 rd para., 1 st sent.	Changed the word “Occurrences” to “Occurrence”, added the word “and” after “heaters” to correct grammatical or syntax error.

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Item	Location	Description of Change
233	S10.4.1.2.3, 3 rd para., 3 rd sent.	Deleted this sentence in its entirety to allow flexibility in site-specific details.
234	S10.4.1.2.3, 4 th para., 1 st sent.	Replaced the words “condenser operates” to “condenser shells normally operate” to allow flexibility in site-specific details. Replaced the word “any” with “air” to clarify the text.
235	S10.4.1.2.3, 4 th para., 5 th sent.	Replaced the word “Radioactive” with “During normal operation, radioactive” and “cannot” with “does not” to allow flexibility in site-specific details.
236	S10.4.1.2.3, 6 th para., 2 nd sent.	Replaced the word “quality” with “chemistry” to clarify meaning or intent (semantics).
237	S10.4.1.2.3, 7 th para., 1 st sent.	Deleted the words “before the condensate” and replaced the word “enter” with the words “before entering” to clarify the text.
238	S10.4.1.2.3, 7 th para., 2 nd sent.	Replaced the words “Before leaving the condenser,” with “During normal power operation,” and at the end of the sentence added the words “before leaving the condenser.” These changes were made to clarify the text.
239	S10.4.1.2.3, 8 th para., 4 th sent.	Replaced the word “normal” with the words “the required” to clarify the text.
240	S10.4.1.2.3, 8 th para., 5 th sent.	Replaced the acronym “CST” with the words “Condensate Storage Tank (CS/CST)” to correct equipment or system description.
241	S10.4.1.2.3, 8 th para., 6 th sent.	Moved the word “respectively” from after “are” to after “redundant” and deleted the word “the” before “availability” to correct grammatical or syntax error.
242	S10.4.1.2.3, 9 th para., 1 st sent.	Deleted the words “coolant system” after “reactor” to clarify the text.
243	S10.4.1.2.3, 9 th para., 1 st sent.	Deleted the words “reactor coolant” after the words “system, the” to clarify the text.
244	S10.4.1.2.3, 9 th para., 1 st sent.	Replaced the word “system” with “reactor” to correct equipment or system description.
245	S10.4.1.3, 1 st para., 2 nd sent.	Added the word “normal” between the words “During operation,” to clarify the text.
246	S10.4.1.3, 3 rd para., 2 nd sent.	Added the word “the” between the words “because main” to correct grammatical or syntax error.

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Item	Location	Description of Change
247	S10.4.1.3, 4 th para., 1 st sent.	Added the word “The” at the beginning of the sentence and added the words “as required” after the word “treated” to clarify the text.
248	S10.4.1.3, 1 st para., 2 nd sent.	Deleted the word “strict” and replaced the word “cleanup” with “purification” to clarify meaning or intent (semantics).
249	S10.4.1.4, 1 st para., 1 st sent.	Replaced the words “is to receive” with the word “receives” to correct grammatical or syntax error.
250	S10.4.1.4, 1 st para., 2 nd sent.	Added the words “to tube sheet” between the words “tube joints” to clarify the text.
251	S10.4.1.4, 1 st para., 3 rd sent.	Replaced the words “is to receive” with the word “receives” to correct grammatical or syntax error.
252	S10.4.1.5.1, 1 st para., 3 rd sent.	Added the word “normally” between “is measured” to clarify meaning or intent (semantics).
253	S10.4.1.5.1, 1 st para., 2 nd sent.	Changed the words “an indicator” to the word “indicator(s)”, “annunciators” with “annunciator(s)” and “annunciation” to “annunciators”. Deleted the words “trip units”. These changes were made to correct equipment or system description.
254	S10.4.1.5.1, 2 nd para., 3 rd sent.	Added the word “desired” after “If”; deleted the words “for operational reasons” to allow flexibility in site-specific details. Replaced “CST” with “CS/CST” to correct equipment or system description.
255	S10.4.1.5.2, 1 st para., 1 st and 2 nd sent.	Joined the first two sentences by deleting the following words “(as required) is measured by gauges, pressure switches, and electronic pressure transducers. Inserted the word “Generator” between the words “Turbine Control”. These”. Inserted “indicator(s)” before “annunciators”, changed “annunciators” to “annunciator(s) and deleted the words “trip units”. These changes were made to clarify the text.
256	S10.4.1.5.2, 1 st para., 2 nd sent.	Replaced the words “Nuclear Boiler” with “RPS” to clarify the text.
257	S10.4.1.5.2, 1 st para., 3 rd sent.	Deleted the words “and redundant” and replaced the word “transmitters” with “instruments”. At the end of the sentence, added “on high condenser pressure”. These changes were made to clarify meaning or intent (semantics).

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Item	Location	Description of Change
258	S10.4.1.5.2, 1 st para., new sent.	Inserted a new sentences: “These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building. These safety-related pressure instruments are located above the flood level in the Turbine Building.” This change was made to incorporate design detail.
259	S10.4.1.5.2, 2 nd para., 3 rd sent.	Removed the words “(reactor scram)” from after the word “valves” to clarify the text.
260	S10.4.1.5.2, 2 nd para., new 4 th sent.	Inserted the following new sentence at the end of the paragraph: “Ultimate overpressure protection for the condenser is provided by rupture discs on the Low Pressure (LP) turbine casings.” This change was made to incorporate design details.
261	S10.4.1.5.3, 1 st para., 1 st and 2 nd sent.	Inserted the words “sensors and” between “temperature controllers” then joined the first two sentences by deleting the following words “controllers. The”. These changes were made to clarify the text.
262	S10.4.1.5.4, 2 nd para., 1 st sent.	Replaced the word “Conductivity of the condensate” with the words “Condensate conductivity” to clarify the text.
263	S10.4.1.5.4, 2 nd para., 2 nd sent.	Replaced the word “sodium” with the words “selected impurities” to clarify the text.
264	S10.4.1.5.4, 2 nd para., 3 rd sent.	Replaced the words “and sodium” with “or impurity” to clarify the text.
265	S10.4.2, 1 st para., 2 nd sent.	Ended this sentence with the word “gases” to correct grammatical or syntax error.
266	S10.4.2, 1 st para., new 3 rd sent.	Replaced the words “and exhausts them” with the words “The condenser air removal system exhausts”; created the acronym “(OGS)”, changed “system” to “subsystem”, replaced the word “plant” with “normal” and moved “(see Turbine Building HVAC system description in Subsection 9.4.4)” to the end of the sentence; deleted the words “at the beginning of each” with “during” and added the words “and shutdown” after “startup”. These changes were made to clarify the text.

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Item	Location	Description of Change
267	S10.4.2.1.2, 1 st bullet, 1 st sent.	Replaced “Offgas System” with “(OGS)”, changed “system” to “subsystem” to correspond with other DCD chapters and sections.
268	S10.4.2.1.2, 2 nd bullet, 1 st sent.	At the end of the sentence, added the words “and when the unit is shutdown” to incorporate design details.
269	S10.4.2.2, Title	Inserted the word “Main” before “Condenser” and replaced the words “Air Removal” with “Evacuation” to correct equipment or system description
270	S10.4.2.2, 1 st para., 2 nd sent.	Changed the words “will be analyzed in the COL phase (see Subsection 10.4.10.3)” to “during construction and operation is addressed in Section 17.2.” This change was made because the COL item is incorporated into the DCD text.
271	S10.4.2.2, 3 rd para., 1 st sent.	Changed the Figure reference from “10.4-3” to “10.4-2”. Deleted the words “double stage” and “(complete with intercondenser)”. Added “(minimum)” after “capacity” and “and shutdown” to the end of the sentence. These changes were made to allow flexibility in site-specific details.
272	S10.4.2.2, 3 rd para., 2 nd sent.	Deleted this sentence in its entirety because details are provided in Figure 10.4-2.
273	S10.4.2.2, 3 rd para., 3 rd sent.	Replaced the word “on” with “in”, inserted the word “simultaneously” after “operated” and replaced “half” with “partial”; deleted the word “each” at the end of the sentence. These changes were made to allow flexibility in site-specific details.
274	S10.4.2.2, 4 th para., 1 st sent.	Added the words “can be used to” between “pumps” and “establish” to clarify meaning or intent (semantics).
275	S10.4.2.2, 4 th para., 3 rd sent.	Changed the start of the sentence to “Process Radiation Monitoring System (PRMS)” to clarify the text. Replaced the referenced section number from “7.5” to “11.5” to correspond with other DCD chapters and sections.
276	S10.4.2.2, 4 th para., 4 th sent.	Inserted the words “and isolate” after the word “trip” and the word “mechanical” before the word “vacuum”; changed “pump” to “pump(s)”. These changes were made to incorporate design details.
277	S10.4.2.2, 5 th para., 1 st sent.	Deleted the word “nuclear” before “steam” to clarify the text.
278	S10.4.2.2, 6 th para., 2 nd sent. & new 3 rd sent.	Deleted the word “however” and separated into a new sentence after “low load operation” to clarify text.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
279	S10.4.2.2, 6 th para., new 3 rd sent.	Deleted “and” to start new sentence, deleted the words “normal” and “during early startup”... Replaced “prove to be” with “are” to correct grammatical or syntax error and to clarify meaning or intent (semantics).
280	S10.4.2.3, 2nd para., 1st sent.	Added the words “and oxygen (or air)” between the words “Steam supply” to allow flexibility in site-specific details. Replaced the words “second-stage” with “steam jet air”; replaced “at” with “above” and deleted the word “specified”. These changes were made to clarify the text.
281	S10.4.2.3, 2 nd para., 2 nd sent.	Changed the sentence to read: “In addition, operation of the mechanical vacuum pumps will be limited above specified reactor power levels to ensure the flammability limit of hydrogen is not reached.” This change was made to clarify the text.
282	S10.4.2.3, 3 rd para., 2 nd sent.	Changed the word “component” to “components” and replaced the words “and would not prevent” to “required for” to clarify meaning or intent (semantics).
283	S10.4.2.3, 4 th para., 1 st sent.	Removed the words “the system have” and added “increase” after the words “in-leakage” and the words “the air removal system” after “or” to clarify meaning or intent (semantics).
284	S10.4.2.3, 4 th para., 3 rd sent.	Replaced the word “inoperable” with “unavailable or has insufficient capacity for increased in-leakage” and replaced “would then” with “could” to clarify meaning or intent (semantics).
285	S10.4.2.4, 1 st para., 2 nd sent.	Removed the words “in-service tests and” to clarify meaning or intent (semantics).
286	S10.4.2.5, 1 st para., 1 st sent.	Changed “and” to “and/or” to allow flexibility in site-specific details.
287	S10.4.2.5, 1 st para., 2 nd sent.	Inserted “oxygen, or air” between the words “steam flow” and replaced “status” with “position indication” to allow flexibility in site-specific details.
288	S10.4.2.5.1, 1 st para., 1 st sent.	Changed the words “Steam” to “Ejector steam supply”, “is” to “are” and removed “in the ejector steam supply lines” from the end of the sentence to clarify the text.
289	S10.4.2.5.1, 1 st para., 2 nd sent.	Deleted the word “Redundant” from the beginning of the sentence, deleted the words “steam” and “at the second-stage inlet” to clarify the text.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
290	S10.4.2.5.1, 1 st para., 3 rd & 4 th sent.	Deleted the word “steam” from in front of flow and joined the third and fourth sentences by deleting “These logic devices provide. Also, deleted the words “should the steam flow drop below acceptable limits for offgas steam dilution” to clarify meaning or intent (semantics).
291	S10.4.2.5.1, 1 st para., new 4 th sent.	Added the following new sentence: “This arrangement limits accumulation of explosive mixtures under low dilution flow conditions.” This change was made to clarify meaning or intent (semantics).
292	S10.4.2.5.2, 1 st para., 2 nd , 3 rd and 4 th sent.	Deleted the following three sentences: “Upon reaching a preset vacuum, the pressure energizes a solenoid valve, which allows additional seal water to be pumped to the vacuum pumps. Seal pump discharge pressures are monitored. Seal water cooler discharge temperature is measured by a temperature-indicating transmitter.” This change was made to allow flexibility in site-specific details.
293	S10.4.2.5.2, 1 st para., 1 st sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
294	S10.4.2.5.2, 1 st para., 2 nd sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
295	S10.4.2.5.2, 1 st para., 6 th and new 7 th sent.	Added “TBCE subsystem” after “discharged to the” and terminated the sentence. Started a new seventh sentence with “The”. These changes were made to clarify meaning or intent (semantics).
296	S10.4.2.5.2, 1 st para., new 7 th sent.	Deleted the word “which” and replaced “monitored” with “plant” to clarify the text.
297	S10.4.2.5.2, 2 nd para., 1 st sent.	Replaced the words “its discharge valve is closed” with the word “and isolated” and deleted the word “-high” from “high-high” to correspond with other DCD chapters and sections.
298	S10.4.3, 1 st para., 1 st sent.	Replaced the word “prevents” with “limits” to clarify meaning or intent (semantics).
299	S10.4.3.1.1.2, 1 st bullet, 1 st sent.	Replaced the words “prevent” with “limit” and “prevent” with “minimize”. Deleted the words “casings of the” and replaced “-generator” with “glands and valves”. These changes were made to clarify meaning or intent (semantics).

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
300	S10.4.3.1.1.2, 2 nd bullet, 1 st sent.	Deleted the words “Turbine Building compartment exhaust” with “TBCE” and replaced “system” with “subsystem”. Added the word “stack” to the end of the sentence. These changes were made to clarify the text.
301	S10.4.3.1.1.2, 3 rd bullet, 1 st sent.	Replaced the word “enough” with the words “sufficient capacity”. Replaced the words “twice the” with “greater than” and “packing” with “gland”. These changes were made to clarify meaning or intent (semantics).
302	S10.4.3.2.1, 1 st para., 2 nd sent.	Replaced the entire sentence with: “The applicability of RG 1.33 during construction and operation is addressed in Section 17.2.” This change was made because the COL item is incorporated into the DCD text.
303	S10.4.3.2.1, 2 nd para., 1 st sent.	Deleted the words “and treatment” from before “of noncondensable” to incorporate design details.
304	S10.4.3.2.1, 2 nd para., 2 nd sent.	Added the words “(see Section 3.2)” at the end of the sentence to correspond with other DCD chapters and sections.
305	S10.4.3.2.1, 3 rd para., 1 st sent.	Replaced Figure number “10.4-4” with “10.4-3” to correspond with other DCD chapters and sections.
306	S10.4.3.2.1, 3 rd para., 2 nd sent.	Deleted the words “a gland steam evaporator” and replaced “regulator” with “controls”. Deleted the word “a” before “gland” and changed “condenser” to “condenser(s)”. These changes were made to incorporate design details. And authorized engineering change.
307	S10.4.3.2.2, 2 nd para., 1 st sent.	Replaced the word “a” with “redundant” and “controller” with “controllers” to incorporate design details.
308	S10.4.3.2.2, 2 nd para., 2 nd sent.	At the end of the sentence, added the words “System (ABS)” to correct equipment or system description.
309	S10.4.3.2.2, 2 nd para., 3 rd sent.	Replaced “Auxiliary Boiler” with “ABS” to correct equipment or system description.
310	S10.4.3.2.2, 2 nd para., 4 th sent.	Replaced the words “the seal” with the words “turbine gland seal system” to correct equipment or system description.
311	S10.4.3.2.2, 3 rd para., 1 st sent.	Changed the word “the” to “a” and “the” to “an” to correct grammatical or syntax error.
312	S10.4.3.2.2, new 2 nd sent.	Added a new second sentence: “This vacuum may be adjusted to suit system requirements.” This change was made to incorporate design details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
313	S10.4.3.2.2, 3 rd para., 3 rd sent.	Changed the word “system” to “subsystem”, inserted the words “by the PRMS” after “monitored” and added “(see Section 11.5)” to the end of the sentence. These changes were made to correct equipment or system description.
314	S10.4.3.3, 1 st para., 1 st sent.	Replaced the word “prevent” with “minimize” to clarify meaning or intent (semantics).
315	S10.4.3.3, 1 st para., 2 nd sent.	Changed the word “pressure” to “pressures” and replaced “approximately 30 kPaG (4.35 psig)” with “full load operating pressure in the shell at the glands”. These changes were made to incorporate design details.
316	S10.4.3.3, 1 st para., 3 rd sent.	Inserted the word “normally” before “operate”. Deleted the words “at all times” from the end of the sentence. These changes were made to clarify meaning or intent (semantics).
317	S10.4.3.3, 1 st para., 4 th sent.	Deleted the words “(i.e., end glands)” after “vent annulus” to clarify the text.
318	S10.4.3.3, 1 st para., 5 th sent.	Changed the words “auxiliary steam system” to “ABS” to correct equipment or system description. Removed “100%” from before “backup” to clarify meaning or intent (semantics).
319	S10.4.3.3, 1 st para., 5 th sent.	Changed the word “A” at the start of the sentence to “At least one” to clarify meaning or intent (semantics).
320	S10.4.3.3, 2 nd para., 1 st sent.	Changed the word “valves” to “valve(s)” to allow flexibility in site-specific details.
321	S10.4.3.3, 2 nd para., 2 nd sent.	Changed the word “valves” to “valve(s)” to allow flexibility in site-specific details.
322	S10.4.3.4, 1 st para., 1 st sent.	Changed the words “will be” to “is” to correspond with other DCD chapters and sections.
323	S10.4.3.4, 1 st para., 3 rd sent.	Deleted the words “tests and” after the word “Periodic” to clarify the text.
324	S10.4.3.5.1.1, 1 st para., 1 st sent.	Deleted the words “and plant computer” at the end of the sentence to correct equipment or system description.
325	S10.4.3.5.1.1, 1 st para., 2 nd sent.	Replaced the word “low” with “degraded” to clarify meaning or intent (semantics).
326	S10.4.3.5.1.3, 1 st para., 1 st sent.	Replaced the word “first” with “normally” to clarify meaning or intent (semantics).
327	S10.4.3.5.1.3, 1 st para., 3 rd sent.	Changed the words “Turbine Building compartment exhaust system” to “TBCE subsystem” to correct equipment or system description.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
328	S10.4.3.5.1.3, 1 st para., 4 th sent.	Replaced “10.4.10.1” with “12.2” and deleted the words “COL information pertaining to” after “for” to correspond with other DCD chapters and sections.
329	S10.4.4, 1 st para., 1 st sent.	Added the words “via the TMSS” after “reactor” to clarify the text.
330	S10.4.4, 2 nd para., new 2 nd sent.	Added a new sentence at the end of the paragraph: “There are no essential systems and components, as defined in BTP SPLB 3-1, in the TBS.” This change was made to incorporate design details.
331	S10.4.4.1.1, 1 st and new 2 nd sent.	Divided the first sentence into two sentences at the word “however” to clarify the text.
332	S10.4.4.1.1, new 2 nd sent.	Inserted the word “main” before “turbine” to correct equipment or system description.
333	S10.4.4.1.1, 1 st para., 2 nd sent.	Deleted the words “safe shutdown earthquake” because SSE is already defined in Section 10.2.1.1.
334	S10.4.4.1.2, 1 st para., 3 rd bullet	Removed the words “without reactor trip and” before the word “without” to incorporate design details and to provide an accurate design basis statement.
335	S10.4.4.2.1, 1 st para., 1 st sent.	Deleted the word “twelve” before “Turbine”, deleted the words “mounted on four chests (three valves per chest)” after “(TBV)” and made “Line equalizer” into “Lines”. These changes were made to allow flexibility in site-specific details.
336	S10.4.4.2.1, 1 st para., 3 rd sent.	Changed the figure number from “10.4-5” to “10.3-1” and deleted the reference to “and 10.4-6” to correspond with other DCD chapters and sections.
337	S10.4.4.2.1, 2 nd para., 1 st sent.	Removed the words “reactor trip and without” before the word “the” to incorporate design details and to provide an accurate design basis statement.
338	S10.4.4.2.1, 3 rd para., 1 st sent.	Deleted the word “system” from after the acronym “TBS” to correct equipment or system description.
339	S10.4.4.2.1, 3 rd para., two new sent.	Added the following new sentences to the end of the paragraph: “The TBS has a design capacity of 110% of rated main steam flow. Failure of a single TBV to open does not result in a system capacity less than 100% of rated main steam flow.” This change was made to incorporate design details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
340	S10.4.4.2.2, 1 st para., 1 st sent.	Deleted the first sentence “In the ESBWR Reference Plant design each valve chest is provided and houses three individual bypass valves.” This change was made to allow flexibility in site-specific details.
341	S10.4.4.2.2, 1 st para., 2 nd sent.	Deleted the words “an angle body type valve” after “valve is” to allow flexibility in site-specific details.
342	S10.4.4.2.2, 1 st para., 3 rd sent.	Deleted the word “chest” after “valve”; deleted the word “three” from before “hydraulic”; changed the word “accumulators” to “accumulator(s)”; deleted the words “(one for each bypass valve); changed “valves” to “valve(s)”; replaced the word “servo” with “solenoid” and changed “valves” to “valve(s)”. These changes were made to allow flexibility in site-specific details.
343	S10.4.4.2.2, 2 nd para.	Deleted the second paragraph in its entirety because the COL item is incorporated into the DCD text.
344	S10.4.4.2.2, 3 rd /new 2 nd para., 2 nd sent.	Replaced the words “at the bottom” with “to the” and inserted “is” before “drained” to allow flexibility in site-specific details.
345	S10.4.4.2.2, new 2 nd para., last sent.	Deleted the last sentence in its entirety to allow flexibility in site-specific details.
346	S10.4.4.2.3, 1 st para., 1 st sent.	Added the acronym “SB&PC” after “System”, changed “preset” to “setpoint” to correct equipment or system description. Deleted the words “steam pressure” from before “by”. These changes were made to clarify meaning or intent (semantics).
347	S10.4.4.2.3, 1 st para., 3 rd sent.	Changed “valves” to “valve(s)” to allow flexibility in site-specific details.
348	S10.4.4.2.3, 1 st para., 5 th sent.	Changed “servo” to “solenoid” to incorporate design details.
349	S10.4.4.2.3, 2 nd para., 3 rd sent.	Deleted the word “Individual” and started the sentence with “Bypass” to allow flexibility in site-specific details. Changed the word “capability” to the words “the capacity” to clarify meaning or intent (semantics). Changed the number “three” to the number “six” to incorporate design details.
350	S10.4.4.2.3, 3 rd para.	Deleted this paragraph in its entirety to allow flexibility in site-specific details.
351	S10.4.4.2.3, 5 th para., 4 th sent.	Replaced the words “high-high” with “degraded” and “pressure” with “vacuum” to clarify meaning or intent (semantics).

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
352	S10.4.4.2.3, 5 th para., 5 th sent.	Deleted this sentence in its entirety to correspond with other DCD chapters and sections.
353	S10.4.4.2.3, 6 th para., 1 st sent.	Replaced the word “codes” with “quality standards” to clarify meaning or intent (semantics).
354	S10.4.4.3, 1 st para., 2 nd sent.	Removed the words “Class 1E” from before position to correspond with other DCD chapters and sections.
355	S10.4.4.3, 1 st para., 3 rd sent.	Replaced the words “Class 1E” with the words “safety-related” to correspond with other DCD chapters and sections.
356	S10.4.4.3, 1 st para., new 4 th sent.	Added the following new sentence: “The TBS has no essential systems and components as defined in BTP SPLB 3-1.” This change was made to incorporate design details.
357	S10.4.4.4, 1 st para., 2 nd sent.	Replaced the words “valve chest” with “bypass valve(s)” to allow flexibility in site-specific details.
358	S10.4.4.4, 1 st para., 3 rd sent.	Inserted the words “tests and” before “inspections”; deleted the words “on a rotating basis” from before “within” and added “and industry practice” to the end of the sentence. These changes were made to clarify meaning or intent (semantics).
359	S10.4.4.5, 1 st para., 1 st sent.	Replaced the word “dome” with “steam area” and deleted the words “at least six electronic” from before “pressure” to incorporate design details.
360	S10.4.4.5, 1 st para., 2 nd sent.	Deleted the words “narrow range” from before “pressure” to incorporate design details.
361	S10.4.4.5, 2 nd para., 2 nd sent.	Deleted the word “three” from before “signals” to allow flexibility in site-specific details. Inserted the words “(via the Turbine Generator control system)” after “valves” to incorporate design details.
362	S10.4.4.5, 2 nd para., 3 rd sent.	Inserted the words “turbine bypass valve” before “control” to correct equipment or system description. Changed “within” to “in” to correct grammatical or syntax error.
363	S10.4.5, 1 st para., 1 st sent.	Deleted the word “waste” before the word “heat” to clarify meaning or intent (semantics).
364	S10.4.5, 2 nd para., 1 st sent.	Added the words “for flooding analysis” after “Subsection 10.4.5.3” to correspond with other DCD chapters and sections.
365	S10.4.5.1.1, 1 st para., 1 st sent.	Replaced the word “safety” with the words “safety-related” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
366	S10.4.5.1.2, 1 st bullet, 1 st sent.	Replaced the words “optimum heat cycle efficiency” with “plant operation” to correspond with other DCD chapters and sections.
367	S10.4.5.1.2, 2 nd bullet, 1 st sent.	Deleted the words “by a two out of three coincident logic” to allow flexibility in site-specific details. Added the words “(see Subsection 10.4.5.6)” at the end of the sentence to correspond with other DCD chapters and sections.
368	S10.4.5.1.2, new 3 rd bullet, 1 st sent.	Added a fourth bullet stating: “The CIRC supplies cooling water at a sufficient flow to accommodate full load rejection without reactor scram.” This change was made to incorporate design details.
369	S10.4.5.1.2, new 4 th bullet, 1 st sent.	Added a fourth bullet stating: “The CIRC supplies cooling water at a sufficient flow to accommodate transition to the Turbine Island mode without exceeding the condenser pressure turbine trip setpoint.” This change was made to incorporate design details.
370	S10.4.5.2.1, 1 st para., 1 st sent.	Added the words “portion of the” after “The” and “in the scope of the ESBWR standard plant” after “(Figure 10.4-1)” to clarify the text.
371	S10.4.5.2.1, 1 st para., 1 st bullet	This bullet was deleted in its entirety to incorporate design details.
372	S10.4.5.2.1, 1 st para., 2 nd bullet	This bullet was deleted in its entirety to incorporate design details.
373	S10.4.5.2.1, 1 st para., 3 rd bullet	Removed “and” from the end of this bullet to correct grammatical or syntax error.
374	S10.4.5.2.1, 1 st para., 6 th bullet	This bullet was deleted in its entirety to incorporate design details.
375	S10.4.5.2.1, 3 rd para., 1 st sent.	Deleted the word “four,” then added the following to the end of the sentence: “the quantity and capacity of the pumps are plant specific”. These changes were made to allow flexibility in site-specific details.
376	S10.4.5.2.1, 4 th para., 1 st sent.	At the beginning of the sentence added the words “For the standard plant” to correspond with other DCD chapters and sections.
377	S10.4.5.2.1, 4 th para., 4 th sent.	Replaced the words “fast actuated motor-operated or electro-hydraulically” with the word “remotely” and deleted the word “butterfly” before the word “valve”. These changes were made to allow flexibility in site-specific details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
378	S10.4.5.2.1, 4 th para., 5 th sent.	Changed the word “minimize” to “minimizes” to correct grammatical or syntax error.
379	S10.4.5.2.1, 6 th para., 1 st sent.	Changed the word “removes” to “remove” to correct grammatical or syntax error.
380	S10.4.5.2.1, 7 th para., 2 nd sent.	Added the word “cleaning” after the words “non-chemical” to clarify meaning or intent (semantics).
381	S10.4.5.2.3, 1 st para., 1 st sent.	Replaced the words “locally mounted hand switches or” with the words “local controls and/or” to incorporate design details.
382	S10.4.5.2.3, 1 st para., 2 nd sent.	Replaced the word “Pumps” with “Pump” to correct grammatical or syntax error.
383	S10.4.5.2.3, 2 nd para., 1 st sent.	Added the word “the” before “circulating” to correct grammatical or syntax error. Changed “switches” to “switch(es)” to allow flexibility in site-specific details. Changed the words “high-high” to “high” to clarify meaning or intent (semantics).
384	S10.4.5.2.3, 2 nd para., 2 nd sent.	Deleted the word “Three” and restarted the sentence with “Level” to allow flexibility in site-specific details. Changed the words “high-high” to “high” to clarify meaning or intent (semantics). Deleted the words “in two of the three level switches” to allow flexibility in site-specific details.
385	S10.4.5.2.3, 2 nd para., 3 rd sent.	Added the words “prior to reaching the trip level setpoint” at the end of the sentence to incorporate design details.
386	S10.4.5.2.3, 2 nd para., 5 th sent.	Added a new sentence to the end of this paragraph: “A reliable logic scheme is used (e.g., 2-out-of-3 logic) to minimize potential for spurious isolation trips.” This change was made to incorporate design details.
387	S10.4.5.2.3, 3 rd para.	Deleted this paragraph in its entirety to allow flexibility in site-specific details and this paragraph provided design details which have no impact on nuclear safety.
388	S10.4.5.3, 1 st para., 1 st sent.	Replaced the words “postulating a complete rupture of a single expansion joint” with the words “(see Section 3.4 and Subsection 10.4.5.6)” to correspond with other DCD chapters and sections.
389	S10.4.5.3, 1 st para., 2 nd sent.	This sentence was deleted in its entirety to correspond with other DCD chapters and sections since details are provided in other DCD chapters.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
390	S10.4.5.3, 2 nd para.	This paragraph was deleted in its entirety to correspond with other DCD chapters and sections since details are provided in other DCD chapters.
391	S10.4.5.4, 1 st para., 1 st sent.	Added the word “acceptable” before the word “leakage” and deleted the words “may be” before “appropriate” and the words “and inspection” after the word “maintenance”. These changes were made to clarify meaning or intent (semantics).
392	S10.4.5.4, 2 nd para., 1 st sent.	Replaced the words “active and passive components” with the word “portion” and deleted the word “station” from before “operation”. These changes were made to clarify the text.
393	S10.4.5.5, 2 nd para., 1 st sent.	Replaced the word “mechanically” with “remotely” to incorporate design details. Deleted the word “butterfly” from before the word “valves” to allow flexibility in site-specific details.
394	S10.4.5.5, 3 rd para., 1 st sent.	Deleted the word “All” from before the word “major” to allow flexibility in site-specific details. Changed “can be” to “are” to correct grammatical or syntax error.
395	S10.4.5.5, 4 th para.	Deleted this paragraph in its entirety to allow flexibility in site-specific details and this paragraph provided design details that have no impact on nuclear safety.
396	S10.4.5.5, new 4 th para., 1 st sent.	Inserted the word “of” after the word “Monitoring”. Replaced the words “across each half of the concenser” with “located on each condenser waterbox”. Replaced the words “remote differential pressure indicators located” before the word “in” with “indication provided”. These changes were made to incorporate design details and to clarify meaning or intent (semantics).
397	S10.4.5.5, 5 th para.	Replaced the words “would be” with the word “are” to correspond with other DCD chapters and sections.
398	S10.4.5.5, 6 th para.	Deleted this paragraph in its entirety because the COL item is incorporated into the DCD text.
399	S10.4.5.5, 7 th para., 1 st sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details and this paragraph provided design details which have no impact on nuclear safety.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
400	S10.4.5.6, 1 st para., 1 st sent.	Deleted the word “Three” from the beginning of the sentence to allow flexibility in site-specific details. Added “CIRC” in front of the word “pumps” to correct equipment or system description. Added “required” before the word “valves” to allow flexibility in site-specific details. Deleted the words “of the CIRC” from before “in case” to clarify meaning or intent (semantics). Added “CIRC” before the word “system” to correct equipment or system description.
401	S10.4.5.6, 1 st para., 2 nd sent.	Changed the words “high-high” to the word “high” to clarify meaning or intent (semantics). Deleted the words “in two of the three switches” from the end of the sentence to allow flexibility in site-specific details.
402	S10.4.5.6, 1 st para., 3 rd sent.	Deleted the words “waterbox” from before “or” and “up to slightly” before the words “above grade” to incorporate design details.
403	S10.4.5.6, 2 nd para., 1 st sent.	Replaced the words “would also produce less flooding in the Turbine Building than what is considered in multiple CIRC failures” with “are discussed in Section 3.4.” This change was made to correspond with other DCD chapters and sections.
404	S10.4.5.6, 2 nd para., 2 nd sent.	This sentence was deleted in its entirety to correspond with other DCD chapters and sections and since details are provided in other DCD chapters.
405	S10.4.5.7, 1 st para., new 1 st bullet	Inserted a new first bullet: “Normal Power Heat Sink (NPHS)” to incorporate design details and to correct equipment or system description.
406	S10.4.5.7, 1 st para., 2 nd bullet	Replaced the words “Screen house” with the word “Pump” and changed “screens” to “screen area”. These changes were made to correct equipment or system description.
407	S10.4.5.7, 1 st para., 3 rd bullet	Added the words “and interconnecting” after the word “discharge” to incorporate design details.
408	S10.4.5.7, 1 st para., new 4 th bullet	Added a fourth bullet that states “CIRC piping outside the Turbine Building” to incorporate design details.
409	S10.4.5.7.2, 1 st para., 1 st sent.	This sentence was replaced with “Systems and components are included with the following interface considerations” because the COL item is incorporated into the DCD text.
410	S10.4.5.8, 1 st para., 1 st sent.	Replaced the word “Standard” with the word “Reference” to correspond with other DCD chapters and sections.
411	S10.4.5.8, 2 nd para., 1 st sent.	Replaced the word “reference” with the word “standard” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
412	S10.4.6, 1 st para., 1 st sent.	Deleted the words “from condenser leakage” to clarify meaning or intent (semantics).
413	S10.4.6.1.2, 6 th bullet	Replaced the words “controllers and sequencers are at least dual redundant and the vessel flow signals and” with the word “controls” to allow flexibility in site-specific details. Added the word “are” after “bypass” to correct grammatical or syntax error.
414	S10.4.6.2.1, 1 st para., 1 st sent.	Replaced the Figure number from “10.4-7” to “10.4-5” to correspond with other DCD chapters and sections.
415	S10.4.6.2.1, 1 st para., 2 nd sent.	Deleted the words “mixed bed” from after the word “resin” to allow flexibility in site-specific details.
416	S10.4.6.2.1, 2 nd para., 2 nd sent.	Deleted the words “fail-open” from before “inlet” to allow flexibility in site-specific details.
417	S10.4.6.2.1, 3 rd para., 1 st sent.	Deleted the words “manually or automatically” before “controlled” and changed “room(s)” to “room”. Added the words “local control panel or the main” after the words “from the”. These changes were made to allow flexibility in site-specific details.
418	S10.4.6.2.1, 3 rd para., 3 rd sent.	Replaced the words “in start-up” with “during” and inserted the word “an” before “emergency”; changed the words “and for short periods” to “for a short period”. These changes were made to clarify meaning or intent (semantics).
419	S10.4.6.2.1, 3 rd para., 4 th sent.	Deleted this sentence in its entirety to allow flexibility in site-specific details.
420	S10.4.6.2.2, 1 st para., 2 nd bullet	Added the words “to minimize corrosion or leaching” at the end of the sentence to incorporate design details.
421	S10.4.6.2.3, 2 nd para., 1 st sent.	Replaced the word “which” to the words “each of which” to clarify meaning or intent (semantics).
422	S10.4.6.2.3, 2 nd para., 2 nd sent.	Replaced the words “The last” with “A filter or”, “be on standby” with “be in service, in standby” and added “out of service for maintenance after “or”. Deleted the words “in the process of being cleaned, emptied or refilled”. These changes were made to incorporate design details.
423	S10.4.6.2.3, 2 nd para., 3 rd sent.	Added the word “of” after “some” and replaced “and” with “or” to correct grammatical or syntax error.
424	S10.4.6.2.3, 3 rd para., 1 st bullet	Deleted the word “saturated” from before “filter” to clarify meaning or intent (semantics).

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Item	Location	Description of Change
425	S10.4.6.2.3, 3 rd para., 2 nd bullet	After the word “unit”, added the words “temporarily allowing some condensate demineralizer bypass” to incorporate design details.
426	S10.4.6.2.3, 4 th para., 4 th sent.	Replaced the word “is” with the words “can be” to correspond with other DCD chapters and sections.
427	S10.4.6.2.3, 5 th para.	This paragraph was deleted in its entirety to allow flexibility in site-specific details.
428	S10.4.6.2.3, 6 th para., 1 st sent.	Deleted the word “either” before the words “be operated” to clarify meaning or intent (semantics).
429	S10.4.6.2.3, 7 th para., 1 st & new 2 nd sent.	Separated this sentence after the acronym “CPS” and started the new sentence by deleting the word “and” before the word “Tank” to clarify the text.
430	S10.4.6.3, 2 nd para., 1 st sent.	Inserted the words “resulting” after “impurities” and “tube” after the word “condenser” to clarify meaning or intent (semantics).
431	S10.4.6.3, 2 nd para., 2 nd sent.	Deleted the words “While these radioactive sources do affect the capacity of the resin thus” and inserted the words “in the CPS” before the word “requires”. These changes were made to clarify meaning or intent (semantics).
432	S10.4.6.3, new 3 rd para.	Added a new paragraph: “Chemistry threshold limits and administrative actions are established to mitigate chemistry excursions in the condensate system.” This change was made to incorporate design details.
433	S10.4.6.3, (old) 3 rd para., 1 st sent.	Added the word “The” before the acronym “CPS” to correct grammatical or syntax error.
434	S10.4.6.3 (old) 4 th para., 2 nd sent.	Deleted the words “As a result,” from the beginning of the sentence, replaced “cannot” with “will not adversely”, deleted “plant” from before “safety”, and changed “safety” to “safety-related equipment or structures”. These changes were made to clarify the text.
435	S10.4.6.4, 1 st para., 2 nd sent.	Changed the word “vessel” to “and” and deleted the words “and system support equipment” from before “can be” to clarify the text.
436	S10.4.6.5, 1 st para., 1 st sent.	Added the words “at the local control panel or” after the word “monitored” and the word “main” before the word “control”. Changed “room(s)” to “room”. These changes were made to incorporate design details.

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Item	Location	Description of Change
437	S10.4.6.5, 1 st para., 2 nd sent.	Replaced the words “conductivity detects” with “conductivity elements detect”, “conductivities” with “conductivity elements” and “leakage; whereas,” to “leakage and”. These changes were made to clarify the text.
438	S10.4.6.5, 1 st para., 4 th sent.	Deleted the words “each vessel” before the word “discharge” to clarify the text.
439	S10.4.6.5, 1 st para., 6 th sent.	Replaced the word “recorded” with “monitored” to clarify meaning or intent (semantics).
440	S10.4.6.5, 1 st para., 8 th sent.	Replaced “A multipoint indicator” with “An indicator”; added the words “and main control room” after the word “panel” to incorporate design details.
441	S10.4.6.5, 1 st para., 9 th sent.	Deleted this sentence in its entirety to allow flexibility in site-specific details.
442	S10.4.6.5, 2 nd para., 1 st sent.	Changed the words “Turbine building” to “Process” to correct equipment or system description. Added the words “(see Subsection 9.3.2)” to the end of the sentence to correspond with other DCD chapters and sections.
443	S10.4.6.5, 2 nd para., 2 nd sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
444	S10.4.6.5, 2 nd para., 3 rd sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
445	S10.4.7, 1 st para., 1 st sent.	Changed the word “hotwells” to “hotwell(s)” to allow flexibility in site-specific details.
446	S10.4.7.1.2, 2 nd bullet	Deleted the word “demand” from before “during”; replaced “steady-state power operation and other plant operation modes” with “anticipated transient conditions”. These changes were made to clarify meaning or intent (semantics).
447	S10.4.7.1.2, 3 rd bullet	Deleted the words and “plant” from before “operation” to clarify meaning or intent (semantics).
448	S10.4.7.1.2, 3 rd bullet	Deleted the words “the following equipment out of service”; added the words “and/or” after the word “pump” and replaced “or one high-pressure heater string with a reduced final FW temperature” with “out of service”. These changes were made to incorporate design details.
449	S10.4.7.1.2, 5 th bullet	Deleted the words “and to lower temperatures during part load operation” from the end of the sentence to incorporate design details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
450	S10.4.7.1.2, new 6 th bullet	Inserted a new sixth bullet: “The C&FS is designed to cool the auxiliary condensers and support other auxiliary condensate loads.” This change was made to incorporate design details.
451	S10.4.7.2.1, 1 st para., 1 st sent.	Replaced the figure number “10.4-2” with “10.1-1” to correspond with other DCD chapters and sections.
452	S10.4.7.2.1, 1 st para., 7 th sent.	Replaced the figure numbers “10.4-8 and 10.4-9” with “10.4-6a, b and 10.4-7a, b” to correspond with other DCD chapters and sections.
453	S10.4.7.2.1, 2 nd para., 1 st sent.	Replaced the number “34” with “33.3” in two instances to incorporate design details. Replaced “on automatic” with “in” to clarify meaning or intent (semantics). Added “three” before “stages of low-pressure” and “two” before “stages of high-pressure” to incorporate design details.
454	S10.4.7.2.1, 2 nd para., 2 nd sent.	Replaced the word “hotwell” with “hotwell(s)” to allow flexibility in site-specific details.
455	S10.4.7.2.1, 2 nd para., 3 rd sent.	Removed the word “exhauster” from before “condenser” to correct equipment or system description. Changed “condenser” to “condenser(s)” in three instances to allow flexibility in site-specific details. Deleted the word “re-combiner” and deleted the word “(coolers)” at the end of the sentence to correct equipment or system description.
456	S10.4.7.2.1, 2 nd para., 5 th sent.	Inserted the word “three (3)” before the word “stages” to incorporate design details.
457	S10.4.7.2.1, 2 nd para., 6 th sent.	Replaced the words “which shall” with the word “that” and changed “supply” to “supplies” to correct grammatical or syntax error.
458	S10.4.7.2.1, 3 rd para., 1 st sent.	Inserted the word “cascaded” before the word “drains” and deleted the words “which originate from the cross around steam moisture separators and reheaters and” and “two sets of”. These changes were made to incorporate design details.
459	S10.4.7.2.1, 4 th para., 1 st sent.	Replaced the number “two (2)” with the number “three (3)” because . Changed the word “heaters” to “heating” to clarify meaning or intent (semantics).
460	S10.4.7.2.1, 4 th para., new 2 nd sent.	Inserted the following new second sentence: “The last stage (No. 7) of FW heating is used for final feedwater temperature control and is normally not in service.” This change was made to incorporate design details.

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Item	Location	Description of Change
461	S10.4.7.2.1, 5 th para., 2 nd sent.	Replaced the words “pre-selected (two out of four FW pumps operating)” to “selected FW pump(s).” This change was made to clarify meaning or intent (semantics).
462	S10.4.7.2.1, 6 th para., 1 st sent.	Deleted the words “is provided around the high-pressure heaters to” and changed “provide” to “provides”; added “the HP” before “heater(s)” to incorporate design details. Replaced “for maintenance/failure” with “to facilitate maintenance” to clarify meaning or intent (semantics).
463	S10.4.7.2.1, 7 th para., 1 st sent.	Deleted the word “well” before the word “deaerated” to clarify meaning or intent (semantics). Added the words “FW as shown on Figure 10.4-2” to correspond with other DCD chapters and sections.
464	S10.4.7.2.1, 8 th and 9 th para.	Fixed text to join the eighth and ninth paragraphs.
465	S10.4.7.2.1, new 8 th para., 2 nd sent.	Deleted “Prior to plant startup,” and restarted the sentence with “Cleanup”; added the word “also” before “accomplished”. These changes were made to clarify the text.
466	S10.4.7.2.2, 1 st para., 1 st sent.	Inserted the words “pressure retaining” before the word “components” and replaced “condensate and FW system that contain the system pressure” with “C&FS”. These changes were made to incorporate design details.
467	S10.4.7.2.2.1, 1 st para., 1 st sent.	Changed the start of the sentence from “Four” to “The four” to correct grammatical or syntax error.
468	S10.4.7.2.2.2, 1 st para., 1 st sent.	Replaced the word “closed” with the words “low-pressure” to correct equipment or system description.
469	S10.4.7.2.2.2, 1 st para., 2 nd sent.	Replaced the words “heaters have integral drain coolers, and their” with “heater”; changed “are cascaded” to “cascade”; replaced “heaters” with “heater” and added the following to the end of the sentence: “that drains to the main condenser”. These changes were made to incorporate design details.
470	S10.4.7.2.2.2, 1 st para., 3 rd sent.	This sentence was deleted in its entirety to incorporate design details.
471	S10.4.7.2.2.2, 1 st para., 4 th sent.	This sentence was deleted in its entirety to incorporate design details.
472	S10.4.7.2.2.2, 1 st para., 7 th sent.	Inserted the words “and the extraction steam non-return valves close” after the word “opens” and deleted the words “to approximately 85%” and insert “in” before the word “power”. These changes were made to incorporate design details.

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Item	Location	Description of Change
473	S10.4.7.2.2.2, 1 st para., 8 th sent.	Deleted the words “without a turbine trip” from the end of the sentence to incorporate design details.
474	S10.4.7.2.2.3, 1 st para., 1 st sent.	Replaced the number “two” with the number “three (3)” to incorporate design details for an Engineering Change Authorization.
475	S10.4.7.2.2.3, 1 st para., new 3 rd sent.	Inserted a new third sentence: “The No. 7 and No. 5 heaters drain to the open feedwater tank.” This change was made to clarify meaning or intent (semantics) and to incorporate design details for an Engineering Change Authorization.
476	S10.4.7.2.2.3, 1 st para., 4 th sent. (formerly the 3 rd sent.)	Deleted the words “that drains to the feedwater tank” from the end of the sentence. This change was made to clarify meaning or intent (semantics) and to incorporate design details for an Engineering Change Authorization.
477	S10.4.7.2.2.3, new 2 nd para.	Inserted a new second paragraph to incorporate design details.
478	S10.4.7.2.2.3, 2 nd para., 1 st sent.	Deleted the words “but requiring no reduction in plant power” after the word “temperature” to incorporate design details.
479	S10.4.7.2.2.3, 2 nd para., 2 nd sent.	Inserted the words “and extraction steam non-return valves” after the words “isolation valves”; replaced the words “high/high” with “abnormally high”. Changed the number “two” to the number “three (3)” because . These changes were made to incorporate design details.
480	S10.4.7.2.2.4, 1 st para., 2 nd sent.	Replaced “level is” with “levels are” and “drain pump” with “respective drain tank”; deleted the words “and recirculation” and changed “lines” to “line”. These changes were made to incorporate design details.
481	S10.4.7.2.2.4, 1 st para., 3 rd sent.	This sentence was deleted in its entirety to allow flexibility in site-specific details.
482	S10.4.7.2.2.5, 1 st para., 2 nd sent.	Deleted the word “the” before the word “condensate” to correct grammatical or syntax error.
483	S10.4.7.2.2.5, 1 st para., 4 th sent.	After the word “Non-condensable”, added the word “gases” to clarify the text.
484	S10.4.7.2.2.5, 1 st para., 3 rd sent.	This sentence was deleted in its entirety to incorporate design details.
485	S10.4.7.2.2.6, 1 st para., 1 st sent.	Replaced the number “34” with “33.3” and inserted “adjustable speed, motor-driven” before “reactor” to incorporate design details.

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Item	Location	Description of Change
486	S10.4.7.2.2.6, 1 st para., 4 th sent.	Replaced the words “pump provides” with “pumps provide” to correct grammatical or syntax error.
487	S10.4.7.2.2.6, 1 st para., 4 th sent.	This sentence was deleted in its entirety to correspond with other DCD chapters and sections.
488	S10.4.7.2.2.6, 2 nd para., 1 st sent.	Replaced the words “operate normally” with “normally operate” and “on” with “in” before “standby” to clarify meaning or intent (semantics).
489	S10.4.7.2.2.6, 2 nd para., 2 nd sent.	Added the word “standby” before “FW” and deleted the words “on standby” after the word “pump” to clarify meaning or intent (semantics).
490	S10.4.7.2.2.6, 2 nd para. new 3 rd sent.	Started a new sentence with “Three reactor FW pumps can supply 135% of rated FW flow.” This change was made to incorporate design details.
491	S10.4.7.2.2.6, 4 th para., 1 st sent.	Deleted the word “Controlled” from the beginning of the sentence to clarify meaning or intent (semantics).
492	S10.4.7.2.3, 1 st para., 1 st sent.	Deleted the words “Normal Operation—” from the beginning of the sentence to clarify meaning or intent (semantics).
493	S10.4.7.2.3, 2 nd para., 1 st sent.	Deleted the words “feed pump” before the word “speed” to clarify meaning or intent (semantics).
494	S10.4.7.2.3, 3 rd para., 1 st sent.	Inserted the words “and shutdown” after the word “startup”; deleted the words “at 0.5-20% of the rated full flow”. These changes were made to incorporate design details.
495	S10.4.7.2.3, 3 rd para., 2 nd sent.	Deleted the word “reactor” before “cleanup” to clarify meaning or intent (semantics).
496	S10.4.7.2.3, 3 rd para., 3 rd sent.	Deleted the words “perform two functions: to” after “heaters” to clarify the text.
497	S10.4.7.2.3, new 4 th para.	Inserted a new fourth paragraph to incorporate design details.
498	S10.4.7.2.3, 4 th para., 1 st sent.	Replaced the sentence “Ten-percent step load and 5%/min ramp changes can be accommodated without a major effect on the C&FS” with “The C&FS has sufficient capacity and control stability to accommodate normally anticipated step and ramp changes in reactor power.” This change was made to incorporate design details.
499	S10.4.7.2.3, 4 th para., 2 nd sent.	Inserted the word “reactor” before the word “safety” to incorporate design details.

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Item	Location	Description of Change
500	S10.4.7.3, 1 st para., 1 st sent.	Replaced the word “safety” with “safety-related” to correspond with other DCD chapters and sections.
501	S10.4.7.3, 3 rd para., 4 th sent.	Added the word “valve” after the word “Relief” to clarify the text.
502	S10.4.7.3, 4 th para., 1 st sent.	Added the word “selected” after the word “bypassing” to clarify meaning or intent (semantics).
503	S10.4.7.3, 6 th para., 1 st sent.	Replaced the words “assure that” with the word “support”; deleted the words “are achieved” and inserted the word “avoid” before “spurious”; deleted the words “are avoided” at the end of the sentence. These changes were made to clarify meaning or intent (semantics).
504	S10.4.7.4.1, 1 st para., 3 rd sent.	Deleted the words “and performance” before the word “test” to clarify the text.
505	S10.4.7.4.1, 1 st para., 4 th sent.	This sentence was removed from this section to correspond with other DCD chapters and sections.
506	S10.4.7.4.2, 1 st para., 1 st sent.	Deleted the word “status” from after “performance”, “leak-tight” from before “integrity” and “all” from before “system” and replaced the word “are” with “is”. These changes were made to clarify meaning or intent (semantics).
507	S10.4.7.4.2, new 2 nd para., 1 st sent.	Inserted the following sentence as a new 2 nd paragraph: “Periodic tests and inspections of the system are performed in conjunction with scheduled maintenance outages.” This change was made to incorporate design details.
508	S10.4.7.5, 1 st para., 1 st sent.	Deleted the words “discharged and minimum” from before “flow rates” to clarify meaning or intent (semantics).
509	S10.4.7.5, 1 st para., 2 nd sent.	Inserted the words “combined with steam flow, reactor level, and setpoint level” after the word “measurements”; deleted the words “FW flow to the” from before “reactor” and “to meet system demands”. These changes were made to incorporate design details.
510	S10.4.7.5, 2 nd para., 1 st sent.	Deleted the words “and the pump minimum flow line” from after “discharge line” to incorporate design details.
511	S10.4.7.5, 2 nd para., 2 nd sent.	Deleted the words “and redundant” from before the word “controls” and, at the end of the sentence, added the words “during normal power operation” to clarify the text.
512	S10.4.7.5, 3 rd para.	This paragraph was deleted in its entirety and “no value or detail was added by this statement”.
513	S10.4.7.5, 4 th para., 4 th sent.	Deleted the word “Redundant” from the beginning of the sentence to clarify the text.

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Item	Location	Description of Change
514	S10.4.7.5, 4 th para., 5 th sent.	Deleted the words “High-level” from the beginning of the sentence and added the words “, where required,” after the word “valves”. These changes were made to clarify meaning or intent (semantics).
515	S10.4.10.1	This COL item is deleted and a reference to subsection 12.2 has been added to subsection 10.4.3.5.1.3. The radiological analysis for TGSS effluents is contained in Chapter 12.
516	S10.4.10.2	The standard ESBWR design is described in the DCD, the COL Applicant is free to propose alternate designs, a specific item is not required to track this. The COL item is deleted.
517	S10.4.10.3	This COL item has been deleted. The phrase: “The applicability of Regulatory Guide 1.33 during construction and operation is addressed in Subsection 17.2” has been added to subsection 10.4.2.2 and 10.4.3.2.1. Subsection 17.2 states that QA responsibilities during construction and operations are COL Applicant scope. The COL item for 10.4.2.2 and 10.4.3.2.1 is redundant to this.
518	S10.4.10.4	Subsection 10.4.5.7.2 has been revised to state: “Systems and components are included with the following interface considerations: <ul style="list-style-type: none"> • Compatible design as described in Subsection 10.4.5.2; • Evaluation per Subsection 10.4.5.3; • Tests and inspections per Subsection 10.4.5.4; • Instrument applications per Subsection 10.4.5.5; and • Flood protection per Subsection 10.4.5.6.” These are design considerations to ensure the CIRC is compatible with the Turbine Plant. The COL item is deleted.
519	S10.4.10.5	This COL item referenced in the response to RAI 10.4-3 has been deleted, this requirement has been incorporated into the text of DCD section 10.4.6.3.
520	S10.4.11	Added a new subsection “References” because a new reference document was added to this section.
521	T10.4-1, 2 nd col., 1 st row	Added the words “Standard Plant” before the word “Value” to correspond with other DCD chapters and sections.

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Item	Location	Description of Change
522	T10.4-1, 1 st col., 2 nd row	Removed the measurement “KW-“ and added the value “MW (BTU/hr)” at the end of the line to correspond with other DCD chapters and sections.
523	T10.4-1, 2 nd col., 2 nd row	Replaced the value “~2,941,000” with “3057 (10.43x10 ⁹)” to incorporate design details.
524	T10.4-1, 2 nd col., 3 rd row	Replaced the following values: “0.0065 (0.94), 0.0087, 0.012 (1.73)” with “0.0067 (0.98), 0.0089 (1.29), 0.012 (1.7)”. These changes were made to incorporate design details.
525	T10.4-1, 1 st col., 4 th row	Inserted the value “(86°F)” before “Circ.” to incorporate design details.
526	T10.4-1, 1 st col., 5 th row	Replaced “ft ³ /hr” with “gpm” to correspond with other DCD chapters and sections.
527	T10.4-1, 2 nd col., 5 th row	Replaced the value “(5.38·106)” with “(671,000)” to correct design standard value.
528	T10.4-1, 1 st col., 10 th row	Replaced “cm ² (in ²)” with “m ² (ft ²)” to correspond with other DCD chapters and sections.
529	T10.4-1, 2 nd col., 10 th row	Replaced the exponent in the value “1.5x10 ¹⁰ ” with “1.5x10 ⁵ ” and replaced the value “(2.32·10 ⁹)” with “(1.61·10 ⁶)” to incorporate design details.
530	T10.4-1, 2 nd col., 12 th row	Deleted the words “ASME Sect. VIII, Div. I, ANSI Standards” to correct design standard.
531	T10.4-1, 2 nd col., 14 th row	Deleted the words “COL applicant to supply” and inserted “0.017 (2.5)” to incorporate design details.
532	T10.4-1, 1 st col., 15 th row	Added the words “and reactor scram” after the word “trip to incorporate design details.
533	T10.4-1, 2 nd col., 15 th row	Deleted the words “COL applicant to supply” and replaced “0.024 (3.4)” with “0.024-0.034 (3.4-4.9)”. These changes were made to incorporate design details.
534	T10.4-1, 1 st col., 16 th row	Added the words “Main steam isolation valve closure, and” before the word “Bypass” to incorporate design details.
535	T10.4-1, 2 nd col., 16 th row	Deleted the words “COL applicant to supply” and inserted “0.068-0.078 (9.8-11.3)” to incorporate design details.
536	T10.4-1, 17 th row	Deleted this line in its entirety to allow flexibility in site-specific details.
537	T10.4-1, 18 th row	Deleted this line in its entirety to allow flexibility in site-specific details.

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Item	Location	Description of Change
538	T10.4-1, first footnote (*)	Removed the word “above” after the word “quoted” to clarify text.
539	T10.4-1, new second footnote (**)	Added a new second footnote “This is CIRC flow required for 100% turbine bypass following a turbine trip. This flow has not been analyzed to support island mode under all conditions.” This change was made to incorporate design details.
540	T10.4-2, Title	Inserted the word “Main” before “Condenser” and replaced the words “Air Removal” with the word “Evacuation” to correct equipment or system description.
541	T10.4-2, 2 nd col., 1 st row	Added the words “Standard Plant” before the word “Value” to correspond with other DCD chapters and sections.
542	T10.4-2, 1 st col., 3 rd row	Added the words “per element” to clarify the text.
543	T10.4-2, 1 st col., 4 th row	Added the words “per set” to clarify the text.
544	T10.4-2, 1 st col., 9 th row	Replaced the words “or larger” with “minimum” to incorporate design details.
545	T10.4-3, 2 nd col., 1 st row	Added the words “Standard Plant” before the word “Value” to correspond with other DCD chapters and sections. Moved the footnote asterisk (*) to after the word “Value” to clarify meaning or intent (semantics).
546	T10.4-3, 2 nd col., 3 rd row	Deleted the footnote asterisk (*) after the value “4” to clarify meaning or intent (semantics).
547	T10.4-3, 7 th , 8 th , 9 th , and 10 th rows	Removed all rows under “Other System Components” to allow flexibility in site-specific details.
548	T10.4-3, 2 nd col., 12 th and 13 th rows	Changed the bullets from two asterisks (**) to three asterisks (***) because of the new bullet added (see above).
549	T10.4-3, new 14 th row	Inserted a new row into this table to incorporate design details.
550	T10.4-3, new 15 th row	Inserted a new row into this table to incorporate design details.
551	T10.4-3, new footnote	Added a new footnote and moved the old #2 to #3 position in the bullet list in this table. The new bullet was added to incorporate design details.
552	T10.4-3, new footnote #4	Added a new footnote #4: “***** Maximum temperature is based on 81°F wet bulb temperature (2% exceedence) and a typical 15°F approach temperature for natural draft cooling towers (see Table 2.0-1).” These changes were made to incorporate design details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
553	T10.4-4, 2 nd col., 1 st row	Added the words “Standard Plant” before the word “Value” and added an asterisk (*) at the end to correspond with other DCD chapters and sections.
554	T10.4-4, 2 nd col., 3 rd row	Deleted the words “(hollow fiber or equivalent)” after “High efficiency” to allow flexibility in site-specific details.
555	T10.4-4, 1 st col., 4 th , 5 th , 8 th and 9 th rows	Deleted the asterisks from these titles because the associated footnote was deleted.
556	T10.4-4, footnote (*)	Added the words “and type” after “number”, and added the word “and” between “filters, demineralizers” to clarify text.
557	T10.4-5, 2 nd col., 1 st row	Added the words “Standard Plant” before the word “Value” and added an asterisk (*) at the end of the title to correspond with other DCD chapters and sections.
558	T10.4-5, 1 st col., 3 rd row	Deleted the asterisk from after the word “rate” the associated footnote was deleted.
559	T10.4-5, 4 th row	Deleted this line in its entirety to allow flexibility in site-specific details.
560	T10.4-5, 1 st col., 5 th row	Deleted the asterisk from after the word “rate” the associated footnote was deleted.
561	T10.4-5, 1 st col., 6 th row	Deleted the asterisk from after the word “size” to incorporate design details.
562	T10.4-5, 1 st col., 7 th row	Deleted the asterisk from after the word “velocity” to incorporate design details.
563	T10.4-5, 1 st col., 7 th row	Deleted the asterisk from after the word “temperature” and replaced the value “148 (298)” with “145.5 (294)”. These changes were made to incorporate design details.
564	T10.4-5, 2 nd col., 10 th row	Deleted the asterisk from after the word “Piping” to incorporate design details.
565	T10.4-5, 2 nd col., 11 th row	Changed “9.17” to “9.1” and “20.21” with “20” to incorporate design details.
566	T10.4-5, 2 nd col., 15 th row	Replaced the value “218.1 (424.6)” with “215.5 (420)” to incorporate design details.
567	T10.4-5, Footnote	At the end of the footnote, added a new sentence: “These are representative values for the standard plant; actual values will vary slightly.” This change was made to allow flexibility in site-specific details.
568	T10.4-5, Footnote	Added a new footnote, “** Can be varied during normal operations” to allow flexibility in site-specific details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
569	T10.4-6, 1 st row, 4 th col.	Replaced the acronym “RCS” with “NBS” to correct equipment or system description.
570	T10.4-6, 4 th col, 3 rd row	Replaced the word “reduces” with “reduce” to clarify meaning or intent (semantics).
571	T10.4-6, 4 th col, 8 th row	Replaced the words “adjusts the reactor” with “is used to adjust the reactor power” to clarify meaning or intent (semantics).
572	F10.4-1	This figure was replaced in its entirety to correspond with other DCD chapters and sections.
573	F10.4-2	This figure was deleted in its entirety to correspond with other DCD chapters and sections.
574	F10.4-3	This figure was replaced in its entirety and renumbered to 10.4-2 and retitled “Main Condenser Evacuation System” to correspond with other DCD chapters and sections. This figure is referenced in the response to RAI 10.4-10.
575	F10.4-4	This figure was replaced in its entirety and renumbered to 10.4-3 to correspond with other DCD chapters and sections.
576	F10.4-5	This figure was deleted in its entirety to correspond with other DCD chapters and sections.
577	F10.4-6	This figure was replaced in its entirety and renumbered to 10.4-4 to correspond with other DCD chapters and sections.
578	F10.4-7	This figure was replaced in its entirety and renumbered to 10.4-5 to correspond with other DCD chapters and sections.
579	F10.4-8a	This figure was replaced in its entirety and renumbered to 10.4-6a to correspond with other DCD chapters and sections.
580	F10.4-8b	This figure was replaced in its entirety and renumbered to 10.4-6b to correspond with other DCD chapters and sections.
581	F10.4-9a	This figure was replaced in its entirety and renumbered to 10.4-7a to correspond with other DCD chapters and sections.
582	F10.4-9b	This figure was replaced in its entirety and renumbered to 10.4-7b to correspond with other DCD chapters and sections.
583	S10A	Globally replaced the word “reference” with “standard” unless otherwise stated to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
584	S10A.1, 1 st para., 1 st sent.	Replaced the word “Reference” with “standard plant” and ended the sentence after the word “Design” to correspond with other DCD chapters and sections.
585	S10A.1, 1 st para., 2 nd (new) sent.	Replaced the words “this notwithstanding” with “However” to clarify text.
586	S10A.1, 2 nd para., 1 st sent.	Removed the word “Although” and restarted the sentence with “The”; removed the word “or” from before “cooling towers” and added the abbreviation “etc.” after “towers”. Replaced the words “plot plan” with “general arrangement” and ended the sentence. These changes were made to clarify meaning or intent (semantics).
587	S10A.1, 2 nd para., (new) 2 nd sent.	Started a new sentence with “Other”; deleted the words “even the designs of the turbine and”, “main” from before “equipment”; changed the word “determine” to “impact”; deleted the words “equipment” and “in the” and moved “Turbine Building” to before arrangement. These changes were made to clarify text.
588	S10A.1, 3 rd para., 1 st sent.	Deleted the words “10A” after “Appendix” and “major” from after “in” to clarify meaning or intent (semantics).
589	S10A.1, 3 rd para., 1 st bullet	Replaced the word “Reference” with “ESBWR standard plant” and “Reference” with “Standard” to correspond with other DCD chapters and sections.
590	S10A.1, 4 th para., 1 st sent.	Inserted the word “no” between “is difference” as well as between “have effect” to clarify text. Replaced “Reference” with “ESBWR standard plant” to correspond with other DCD chapters and sections.
591	S10A.1, 5 th para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” and deleted “10A” at the end of the sentence to correspond with other DCD chapters and sections.
592	S10A.1, 6 th para.	This paragraph was deleted in its entirety to allow flexibility in site-specific details.
593	S10A.1, SUMMARY DESCRIPTION, 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
594	S10A.1, Summary description, 12 th para., 1 st sent.	Changed “non safety-related” to “nonsafety-related” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
595	S10A.1, SUMMARY DESCRIPTION, 5 th para., 1 st sent.	Changed “Table 10.1-1” to “Table 10A.1-1” to correspond with other DCD chapters and sections.
596	S10A.1, SUMMARY DESCRIPTION, 5 th para., 2 nd sent.	Replaced the word “on” with “in” and “water cooling” with “cooling water” to clarify meaning or intent (semantics).
597	S10A.1, SUMMARY DESCRIPTION, 5 th para., 3 rd sent.	Replaced the word “direct-“ with the words “once through” and terminated the sentence after the word “design” to clarify text.
598	S10A.1, SUMMARY DESCRIPTION, 8 th para., 3 rd sent.	Renumbered to “9 th ” to correspond with other DCD chapters and sections.
599	S10A.1, SUMMARY DESCRIPTION, 10 th para., 3 rd sent.	Renumbered to “11 th ” to correspond with other DCD chapters and sections.
600	S10A.1, SUMMARY DESCRIPTION, 11 th para., 1 st sent.	Inserted the words “as needed” before the word “for” and deleted “necessary” from before the word “radiation” to clarify meaning or intent (semantics).
601	S10A.1, SUMMARY DESCRIPTION, 12 th para., 3 rd sent.	Renumbered to “13 th ” to correspond with other DCD chapters and sections.
602	S10A1.1, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
603	S10A1.2, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
604	S10A1.3, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
605	T10A.1-1, 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
606	T10A.1-1, 1 st row, 2 nd col.	Inserted the words “Standard Plant” before the word “Value” to correspond with other DCD chapters and sections.
607	T10A.1-1, 10 th row, 2 nd col.	Inserted the value “1,636” to incorporate design details.
608	T10A.1-1, 16 th row, 2 nd col.	Inserted the value “2” to incorporate design details.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
609	T10A.1-1, 32 nd row, 2 nd col.	Replaced the value “10 ⁶ ” with the value “10 ³ ” to correct numerical error.
610	T10A.1-1, 38 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
611	T10A.1-1, 42 nd row	Deleted this row in its entirety to allow flexibility in site-specific details.
612	T10A.1-1, 46 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
613	T10A.1-1, 50 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
614	T10A.1-1, 55 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
615	T10A.1-1, 60 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
616	T10A.1-1, 64 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
617	T10A.1-1, 70 th row	Deleted this row in its entirety to allow flexibility in site-specific details.
618	T10A.1-1, 71 st row	Deleted this row in its entirety to allow flexibility in site-specific details.
619	S10A2.1, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
620	S10A2.1.1, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
621	S10A2.1.2, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
622	S10A2.1.2, (6) para., 1 st sent.	Replaced the number “2/3” with “Replaced “2/3” with “two-out-of-three” and “2/4” with “two-out-of-four”. Deleted the words “for all but the vibration trips (which are at least 2/2 per bearing)” and terminated the sentence after “logic”. These changes were made to allow flexibility in site-specific details.
623	S10A2.1.2, (6) para., 2 nd sent.	Inserted the word “generator” after the word “turbine” and “system” after the word “control” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
624	S10A2.1.3, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
625	S10A2.2.1, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
626	S10A2.2.1, 3 rd para., 3 rd sent. & 4 th new sent.	Terminated the third sentence after the word “safe” and started a new fourth sentence by deleting the word “hence” and starting the new sentence with the word “Any” to clarify text.
627	S10A2.2.2, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
628	S10A.2.2.2.1, 1 st para., 1 st sent.	Defined the acronym “Intermediate Pressure (IP)” to correspond with other DCD chapters and sections.
629	S10A.2.2.2.6, 1 st para., 1 st sent.	Replaced the word “again” with “further” to clarify meaning or intent (semantics).
630	S10A.2.2.2.6, 1 st para., Design data – LP module	Deleted the “Design data - LP module” information in its entirety to correspond with other DCD chapters and sections.
631	S10A.2.2.2.7, 1 st para., 7 th sent.	Deleted the words “combined intermediate valves (CIVs)” and replaced it with the words “intermediate stop and intercept” to correct equipment of system description.
632	S10A2.2.2.10, 1 st para., 2 nd sent.	Inserted the word “hydrogen” before the word “gas” to clarify meaning or intent (semantics).
633	S10A2.2.2.10, 1 st para., 6 th sent.	Moved the word “static” from before “excitation” and put it before the word “generator” to clarify meaning or intent (semantics).
634	S10A2.2.2.10, 3 rd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
635	S10A2.2.2.10, 4 th para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
636	S10A2.2.2.10, 5 th para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
637	S10A2.2.2.10, 6 th para., 1 st sent.	Replaced the word “elaborated” with “created” to clarify meaning or intent (semantics).
638	S10A2.2.2.11	This section was deleted in its entirety because the COL item was incorporated into the DCD text.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
639	S10A.2.2.2.12	This section was deleted in its entirety because the COL item was incorporated into the DCD text.
640	S10A.2.2.2.13	This section was deleted in its entirety because the COL item was incorporated into the DCD text.
641	S10A.2.2.3, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ESBWR standard plant” to correspond with other DCD chapters and sections.
642	S10A.2.2.3, 2 nd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
643	S10A.2.2.3, 3 rd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
644	S10A.2.2.4, 1 st sent.	Replaced this sentence with “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
645	S10A.2.2.5, 1 st sent.	Replaced this sentence with “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
646	S10A.2.2.5, diagram and all succeeding paragraphs	This section was deleted in its entirety to correspond with other DCD chapters and sections.
647	S10A.2.2.6, 1 st sent.	Replaced this sentence with “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
648	S10A.2.2.7, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
649	S10A.2.2.7, 2 nd para.	This sentence was deleted in its entirety because the COL item was incorporated into the DCD text.
650	S10A.2.2.7, 2 nd para., bullets numbers: 1, 2, 3, 4, 6, 8 and 9	These bullets were deleted in their entirety because the COL item was incorporated into the DCD text.
651	S10A.2.3.1, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
652	S10A.2.3.1, 3 rd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
653	S10A.2.3.2, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
654	S10A.2.3.2, 2 nd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
655	S10A.2.3.2, 2 nd para., 6 th sent.	This sentence was deleted in its entirety because the COL item was incorporated into the DCD text.
656	S10A.2.3.2, 3 rd & 4 th para.	These paragraphs were deleted in their entirety because the COL item was incorporated into the DCD text.
657	S10A.2.3.3, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections. Deleted the words “except in the following paragraphs” because the COL item was incorporated into the DCD text.
658	S10A.2.3.3, 2 nd & 3 rd para.	These paragraphs were deleted in their entirety because the COL item was incorporated into the DCD text.
659	S10A.2.3.4, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
660	S10A.2.3.4, 1 st para., 2 nd bullet, new sentence	At the end of the second bullet, the following new sentence was added: “A torsional vibration analysis shall show that the Turbine Generator rotor resonance is outside of the normal operating frequency and its harmonics.” This sentence was added to incorporate a design requirement or commitment into the text of the DCD.
661	S10A.2.3.4, 1 st para., 4 th bullet, 2 nd sent.	Replaced the word “submitted” with “available” to clarify meaning or intent (semantics).
662	S10A.2.3.4, 1 st para., 4 th bullet, 3 rd sent.	This sentence was deleted in its entirety: “The basis for the assumed design overspeed will be submitted to the NRC staff for review. (See Subsection 10.2.5.2 for COL information.)” It was replaced with this new sentence: “On a unit-specific basis, a report will provide the overspeed basis (including setpoints) applicable to the site and discuss how the turbine assembly is designed to withstand the normal conditions, anticipated operational occurrences, and accidents resulting in a turbine trip.” This change was made to incorporate a design requirement or commitment into the text of the DCD.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
663	S10A.2.3.4, 1 st para., 4 th bullet, new sentence	At the end of the fourth bullet, the following new sentence was added: “On a unit-specific basis, a report will provide a general description of the design features of the turbine, rotor, shaft, couplings and buckets/blades, including the number of stages, bucket (blade) design, how the buckets are attached to the rotor, whether the turbine rotor is forged, and pertinent fabrication methods (e.g., provide drawings).” This change was made to incorporate a design requirement or commitment into the text of the DCD.
664	S10A.2.3.5, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
665	S10A.2.3.6, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
666	S10A.2.3.6, 2 nd para., 1 st sent.	Replaced the words “need not” with “only needs to” and “more often than” with “approximately” to clarify meaning or intent (semantics).
667	S10A.2.3.6, 3 rd para., 2 nd sent.	This sentence was deleted in its entirety because the COL item was incorporated into the DCD text.
668	S10A.2.4, 1 st para., 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
669	S10A.2.5, Title	Replaced the Title “Low Pressure Turbine Disk Fracture Toughness” with “Turbine Torsional Vibration Analysis” to provide design requirements that will be the responsibility of the COL Holder.
670	S10A.2.5.1, 1 st para., 1 st sent.	Replaced the sentence: “See Subsection 10A.2.3.1 for turbine material selection” with “Same as Reference Design.” To correspond with other DCD chapters and sections.
671	S10A.2.5.2, 2.5.3 and 2.5.4	Deleted these subsections in their entirety there was no changed from DCD Chapter 10.
672	F10A.2-1, 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
673	F10A.2-2, 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
674	F10A.2-3, 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
675	F10A.2-3, Title	Deleted the word “Generator” and replaced the words “and CO ₂ ” with “Gas Control” to correspond with other DCD chapters and sections.
676	S10A.3 all subsections	In all cases in this sub-section, globally replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
677	S10A.3.2.3, 1 st and 2 nd para.	These paragraphs were deleted in their entirety because the COL item was incorporated into the DCD text.
678	S10A.3.7.1, S10A.3.7.2 and S10A.3.7.3	These subsections were deleted in their entirety and replaced with “Same as ESBWR standard plant design.” This change was made to incorporate a design requirement or commitment into the text of the DCD.
679	T10A.3-1, 1 st sent.	Replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
680	T10A.3-1, 1 st row, 2 nd col.	Changed the first row to match Table 10.3-1 to correspond with other DCD chapters and sections.
681	S10A.4 all subsections	In all cases in this sub-section, globally replaced the word “Reference” with the words “ <i>ESBWR standard plant</i> ” to correspond with other DCD chapters and sections.
682	S10A4.2, Title	Inserted the word “Main” before “Condenser” to correspond with other DCD chapters and sections. Replaced the words “Air Removal” with “Evacuation” to incorporate design details.
683	S10A.4.3.2.1, 1 st para., 1 st sent.	Removed the words “except in the following paragraph” because the COL item was incorporated into the DCD text.
684	S10A.4.3.2.1, 3 rd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
685	S10A.4.3.2.2, 1 st para., 1 st sent.	Removed the words “except in the following paragraph” because the COL item was incorporated into the DCD text.
686	S10A.4.3.2.2, 2 nd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
687	S10A.4.3.3, 1 st para., 5 th sent. through 9 th sent.	These sentences were deleted in their entirety because the COL item was incorporated into the DCD text.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
688	S10A.4.3.5.3, section	This section was deleted in its entirety to correspond with other DCD chapters and sections.
689	S10A.4.5, 1 st para., 1 st sent.	Deleted the phrase “except in the following paragraph” because the COL item was incorporated into the DCD text.
690	S10A.4.5, 1 st para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
691	S10A.4.5.2.1, 4 th para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
692	S10A.4.5.2.1, 7 th para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
693	S10A.4.5.2.3, 1 st para., 1 st sent.	Deleted the phrase “except in the following paragraph” because the COL item was incorporated into the DCD text.
694	S10A.4.5.2.3, 2 nd para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
695	S10A.4.5.2.3, 1 st sent. of the 3 rd para.	This sentence was deleted in its entirety because the COL item was incorporated into the DCD text.
696	S10A.4.5.5, 1 st sent.	Deleted the phrase “except in the following paragraph” because the COL item was incorporated into the DCD text.
697	S10A.4.5.5, 5 th para.	This paragraph was deleted in its entirety because the COL item was incorporated into the DCD text.
698	S10A.4.5.6, 1 st para.	Replaced this paragraph in its entirety with “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
699	S10A.4.5.8, 1 st and 2 nd para.	Replaced these paragraphs in their entirety with “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
700	S10A.4.7.1, items (1) and (2)	These list items were deleted in their entirety because the COL item was incorporated into the DCD text.
701	S10A.4.7.1, item (3)	This list item was renumbered to (5) to correspond with other DCD chapters and sections.
702	S10A.4.7.2.2, 5 th para., 2 nd sent.	Changed the word “startups” to “startup”. Inserted the words “RPV level is controlled by” before “a low”; deleted the words “(two out of four)”; deleted the prefix “pre-“ from before “selected” and at the end of the sentence replaced the phrase “FW pumps operating at their minimum fixed speed control the RPV level” with “feedwater pumps”. These changes were made to clarify meaning or intent (semantics).

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
703	S10A.4.7.2.2, 1 st sent.	Deleted this sentence in its entirety because the COL item was incorporated into the DCD text.
704	S10A.4.7.2.2.1, new subsection	Created a new subsection for “Condensate Pumps” and added the first paragraph to state: “ <i>Same as the ESBWR standard plant design</i> ” to correspond with other DCD chapters and sections.
705	S10A.4.7.2.2, 4 th paragraph title	Created a new subsection by deleting “4 th paragraph” and numbering it “10A.4.7.2.2.1” to correspond with other DCD chapters and sections. Changed the title from “High Pressure” to “High-pressure” to correct equipment or system description.
706	S10A.4.7.2.2, 1 st para. 1 st sent.	Deleted the words “Low-pressure closed Feedwater Heaters” from the beginning of this paragraph” to correct grammatical or syntax error.
707	S10A.4.7.2.2, 5 th paragraph title	Deleted this paragraph in its entirety because the COL item was incorporated into the DCD text.
708	S10A.4.7.2.3, 7 th paragraph title	Created a new subsection by deleting “7 th paragraph” and numbering it “10A.4.7.2.2.3” with the title “High-Pressure Feedwater Heaters” to correspond with other DCD chapters and sections.
709	S10A.4.7.2.3, 7 th para. 2 nd sent.	Deleted this sentence in its entirety because there is no change from DCD Chapter 10.
710	S10A.4.7.2.2.4, new subsection and paragraph	Created a new subsection titled “MSR Drain Tanks” and inserted a new first paragraph stating “Same as ESBWR standard plant design” to correspond with other DCD chapters and sections.
711	S10A.4.7.2.2.5, new subsection and paragraph	Created a new subsection titled “Open Feedwater Heater” and added the following new 1 st paragraph: “Low-pressure heater stage No. 5 is combined with a large horizontal storage tank (feedwater tank). The open FW heater receives condensate from the outlet of the low-pressure heater strings. Heating steam flows to the open FW heater to raise the temperature of the condensate to approximately saturation level. Non-condensable gases are vented to the main condenser.” This change was made to correspond with other DCD chapters and sections.
712	S10A.4.7.2.2.6, new subsection and paragraph	Created a new subsection titled “Reactor Feedwater Pumps” and inserted a new first paragraph stating “Same as ESBWR standard plant design” to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
713	S10A.4.7.2.3, “System Operation” subsection re-numbered	Deleted the phrase “except in following paragraphs” because the COL item was incorporated into the DCD text.
714	S10A.4.7.2.3, 2 nd and 3 rd paragraphs	These paragraphs were deleted in their entirety because the COL item was incorporated into the DCD text.
715	S10A.4.7.5, 1 st sentence	This subsection was re-numbered to “10A.4.7.2.
716	S10A.4.10.1, subsection	This subsection was rewritten in its entirety to provide design requirements that will be the responsibility of the COL Holder.
717	T10A.4-1, 1 st sentence	Replaced the word “Reference” with “ESBWR Standard Plant” to be consistent with Table 10.4-1 and to correspond with other DCD chapters and sections.
718	T10A.4-1, 1 st row, 2 nd col.	Inserted “Standard Plant” before the word “Value” to be consistent with Table 10.4-1 and to correspond with other DCD chapters and sections.
719	T10A.4-1, 11 th row, 2 nd col.	Deleted the value “1” because the COL item was incorporated into the DCD text.
720	T10A.4-1, 14 th row, 2 nd col.	Deleted the value “0.019 (2.76)” because the COL item was incorporated into the DCD text.
721	T10A.4-1, 15 th row, 2 nd col.	Added the words “and reactor scram” after the word “trip” and deleted the value “0.0245 (3.55)” because the COL item was incorporated into the DCD text.
722	T10A.4-1, 16 th row, 1 st col.	Added the words “Main steam isolation valve closure and” before “Bypass” to correspond with other DCD chapters and sections.
723	T10A.4-1, 17 th row	Deleted this row in its entirety because the information and values were moved to the line above.
724	T10A.4-2, Title	Inserted the word “Main” before “Condenser” and replaced the words “Air Removal” with the word “Evacuation” to incorporate design details.
725	T10A.4-6, 1 st row, 4 th col.	Replaced the acronym “RCS” with “NBS” to correct equipment or system description.
726	F10A.4-2, Drawing, Sheet 1 of 2	This drawing was deleted in its entirety because the COL item was incorporated into the DCD text.
727	F10A.4-2, Drawing, Sheet 2 of 2	This drawing was deleted in its entirety because the COL item was incorporated into the DCD text.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
728	F10A.4-3, Drawing title	Renumbered the drawing from “10A.4-3” to “10A.4-2”. Inserted the word “Main” before “Condenser” to correspond with other DCD chapters and sections. Replaced the words “Air Removal” with the word “Evacuation” to incorporate design details.
729	F10A.4-4, Drawing title	This drawing was deleted and renumbered the drawing from “10A.4-4” to “10A.4-3”. The words “Same as ESBWR standard plant design” were added. These changes were made so that the drawing matches Figure 10.4-3 to correspond with other DCD chapters and sections.
730	F10A.4-5, page	This page was deleted to correspond with other DCD chapters and sections.
731	F10A.4-6, Drawing title	This drawing was renumbered the drawing from “10A.4-6” to “10A.4-4”. This change was made because of the previous renumbering and to correspond with other DCD chapters and sections.
732	F10A.4-7, Drawing title	This drawing was renumbered the drawing from “10A.4-7” to “10A.4-5”. This change was made so that the drawing matches Figure 10.4-5 and to correspond with other DCD chapters and sections.
733	F10A.4-8, page	This drawing was deleted because the COL item was incorporated into the DCD text.
734	F10A.4-9, Drawing title, Page 1 of 2	This drawing was renumbered the drawing from “10A.4-9, Sheet 1 of 2” to “10A.4-6, Sheet 1 of 2”. This change was made because of the previous renumbering and to correspond with other DCD chapters and sections.
735	F10A.4-9, Drawing title, Page 2 of 2	This drawing was renumbered the drawing from “10A.4-9, Sheet 2 of 2” to “10A.4-6, Sheet 2 of 2”. This change was made because of the previous renumbering and to correspond with other DCD chapters and sections.
736	F10A.4-10, Drawing title, Page 1 of 2	This drawing was renumbered the drawing from “10A.4-10, Sheet 1 of 2” to “10A.4-7, Sheet 1 of 2”. This change was because of the previous renumbering and to correspond with other DCD chapters and sections.
737	F10A.4-10, Drawing title, Page 2 of 2	This drawing was renumbered the drawing from “10A.4-10, Sheet 2 of 2” to “10A.4-7, Sheet 2 of 2”. This change was because of the previous renumbering and to correspond with other DCD chapters and sections.

Chapter 10 Revision 2 to Revision 3 Change List

Item	Location	Description of Change
738	F10A.4-11, Drawing title	This drawing was renumbered the drawing from “10A.4-11” to “10A.4-8”. This change was because of the previous renumbering and to correspond with other DCD chapters and sections.
739	F10A.4-8, page footer	Deleted the following footer from this page “ {{{Sensitive unclassified information provided under separate submittal per 10CFR2.390.}}} ” because it was not applicable.