

ESBWR DCD Tier 2 Sections 3.9-3.11
26A6642AK Revision 5 to Revision 6 Change List

Item	Location	Description of Change
1.	Entire Chapter	Global chapter editorial changes to correct misspelling and grammar, spell out or integrate acronyms where appropriate, and update references as needed and where required.
2.	S3.9.2.2.2, Other ASME B&PV Code, Section III Equipment, 1 st para., last sentence	Replaced “test” with seismic event for clarity.
3.	S3.9.2.3	Subsection revised to reflect Tier 2* designation in response to RAI 3.9-253.
4.	S3.9.2.3, old last para.	Corrected “48.6” to “49.6” for accuracy.
5.	S3.9.2.4, 4th para.	Deleted inconsistent sensor locations and referred to Appendix 3L for correct sensor locations.
6.	S3.9.2.4, 9 th para.	Replaced “Reference 3.9-6” with “Appendix 3L” to refer to this appendix
7.	S3.9.2.4, last para. and old last para.	COL Holder item 3.9.9-1-H was rewritten as COL Applicant 3.9.9-1-A based on NRC request. The change was reviewed and accepted by both NRC and DCWG.
8.	S3.9.3.1, last sentence	Added sentence to clarify requirements for fatigue analyses of Class I components, per the NRC’s request during an audit of risk-significant components.
9.	S3.9.3.1, 3rd, 6th, and new 7th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
10.	S3.9.3.1, new 5th para.	Paragraph added for consistency with changes made to COL Item 3.9.9-2-A based on NRC request. The change was reviewed and accepted by both NRC and DCWG.
11.	S3.9.3.1.1, 7th para., table, and new 10th para.	Table revised to reflect Tier 2* designation in response to RAI 3.9-253.
12.	S3.9.3.1.2	Subsection revised to reflect Tier 2* designation in response to RAI 3.9-253.

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13.	S3.9.3.2, 2nd, 3rd, and new 4th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
14.	S3.9.3.2, 2nd para., 3rd sentence	Revised wording for clarification.
15.	S3.9.3.3	Subsection revised to reflect Tier 2* designation in response to RAI 3.9-253.
16.	S3.9.3.4, 4th, 11th, and new 13th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
17.	S3.9.3.5, last para.	Paragraph added to reflect Tier 2* designation in response to RAI 3.9-253.
18.	S3.9.3.5.1, first sentence	Deleted references to Tables 6.2-21 and 6.2-42 and changed “SLC valves” to “SLC injection valves” for accuracy.
19.	S3.9.3.5.1, Depressurization Valves	Revised to reflect that the DPVs were moved from the RPV stub tubes to the ICS lines.
20.	S3.9.3.6, 2nd, 3rd, 8th, and new 11th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
21.	S3.9.3.6, Depressurization Valves	Revised to reflect that the DPVs were moved from the RPV stub tubes to the ICS lines.
22.	S3.9.3.7, 1st to 5th, and new 7th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
23.	S3.9.3.7.1, 1st, 3rd, 6th to 8th, 10th para. 3(b), c(iii), e, and last para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
24.	S3.9.3.7.1, 10th para, Item (3)b, 1st para	Deleted reference to “ASME Section XI Code” in response to RAI 3.9-248.
25.	S3.9.3.7.1, Item (3)f, first sentence	Removed reference to “COL Holder.” COL Item 3.9.9-2-A requires the applicant to submit a milestone for completion of a plant-specific snubber data table.
26.	S3.9.3.7.2, 1st and 2nd para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
27.	S3.9.3.8, third-to-last sentence	Corrected “3.9.3.5” to “3.9.3.7.”
28.	S3.9.3.9.1, 1st and 4th para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.

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29.	S3.9.3.9.2, 1st and 3rd para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
30.	S3.9.3.9.3, 1st and 3rd para.	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.9-253.
31.	S3.9.5.1, 1st para., 2nd sent.	Deleted “laterally” for accuracy.
32.	S3.9.5.1, 2nd para., 4th and 6th sent.	Deleted “plate” for accuracy.
33.	S3.9.5.2, 1st para, 1st sentence	Corrected reference.
34.	S3.9.5.4, last para.	Paragraph revised in response to RAI 3.9-252.
35.	S3.9.6.1.4, Item (1), 1 st para.	Revised paragraph in response to RAI 3.9-249.
36.	S3.9.9, 3.9.9-1-H	COL Holder item 3.9.9-1-H was rewritten as COL Applicant 3.9.9-1-A based on NRC request. The change was reviewed and accepted by both NRC and DCWG.
37.	S3.9.9, 3.9.9-2-H	COL Holder item 3.9.9-2-H was rewritten as COL Applicant 3.9.9-2-A based on NRC request. The change was reviewed and accepted by both NRC and DCWG.
38.	S3.9.10, Ref. 3.9-6	Deleted Reference 3.9-6 since it is no longer referenced in Section 3.9.
39.	S3.9.10, Ref. 3.9-7	Reference added in response to RAI 3.9-252.
40.	S3.9.10, Ref 3.9-8	Added Reference 3.9-8 for completeness.
41.	T3.9-1	Revised to include separate entries for SRV and DPV actuation with different ASME service limits and numbers of cycles, for accuracy.
42.	T3.9-2	Table revised to reflect Tier 2* designation in response to RAI 3.9-253.
43.	T3.9-2 Legend, DPV	Revised to reflect that the DPVs were moved from the RPV stub tubes to the ICS lines.
44.	T3.9-3	Revised pressure differences for Items 1, 3, 4 and 9 based on updated analyses. Added Note (3) for clarification.
45.	T3.9-8, General	Eliminated optional valve and actuator types such that each valve specified a single valve and actuator type.

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46.	T3.9-8, General	Deleted valve number suffixes (e.g., "A/B") for simplicity.
47.	T3.9-8, B21 Nuclear Boiler System Valves, Nos. "F001" and "F002"	Deleted GB as a possible valve type for B21-F001 and F002 in response to RAI 5.4-61.
48.	T3.9-8, B21, F004	Deleted "on the stub tube connected to the RPV" since the DPVs were moved from the RPV stub tubes to the ICS lines.
49.	T3.9-8, B21 F102	Deleted fail-closed test since the valve does not fail closed.
50.	T3.9-8, B21 F031	Corrected Safety Position from O/C to C.
51.	T3.9-8, B21 F033	Corrected valve tag number from F033 to F032.
52.	T3.9-8, B32 F011	Corrected required tests to reflect the change in valve type to a relief valve.
53.	T3.9-8, B32 F012	Corrected fail-closed test to a fail-open test to reflect the fail safe position, and added a stroke-open test since the safety position is open/closed.
54.	T3.9-8, B32 F104 and F105	Description revised in response to RAI 7.1-140.
55.	T3.9-8, C12	Added valves F071 and F072 in response to RAI 21.6-103.
56.	T3.9-8, C41 Standby Liquid Control System Valves	Revised F002A/B/C/D in response to RAI 3.9-251.
57.	T3.9-8, E50 F004, F008, F009 and F010	Corrected code class from 3 to 2 for consistency with Tier 2, Table 3.2-1.
58.	T3.9-8, G21 F324	Added fail-closed test since the fail safe position is closed.
59.	T3.9-8, P10, F016	Changed Valve Function to "A" for active since all check valves are considered active in the Inservice Test Program. Added stroke open and stroke closed tests for consistency.
60.	T3.9-8, T62 Containment Monitoring System Valves	Deleted Nos. F005B/C, F007B/C, F010B/C, F015, F016, F021, F022, F023, F024 and F025 in response to RAI 6.2-200.
61.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. "F002B/C" to "F001B/C" and "F004B/C" to "F002B/C" and revised descriptions in response to RAI 6.2-200.

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62.	T3.9-8, T62 Containment Monitoring System Valves	Revised No. F006B/C in response to RAI 6.2-200.
63.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. “F009B/C” to “F005B/C” and added “Outboard” in response to RAI 6.2-200.
64.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. “F013A/B” to “F003B/C” and “F014A/B” to “F004B/C” and revised descriptions in response to RAI 6.2-200.
65.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. “F709A/B” to “F709B/C,” “F711A/B” to “F711B/C,” and “F713A/B” to “F713B/C” and revised descriptions in response to RAI 6.2-200. Note that valve number suffixes (e.g., “A/B”) have subsequently been deleted.
66.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. “F715” to “F715B/C” and “F717A/B” to “F717A/B/C/D” and revised quantities and descriptions in response to RAI 6.2-200. Note that valve number suffixes (e.g., “A/B”) have subsequently been deleted.
67.	T3.9-8, T62 Containment Monitoring System Valves	Revised Nos. F719A/B/C/D and F721A/B in response to RAI 6.2-200.
68.	T3.9-8, T62 Containment Monitoring System Valves	Added Nos. F723A/B, F733A/B/C/D and F735A/B in response to RAI 6.2-200.
69.	T3.9-8, T62 Containment Monitoring System Valves	Changed Nos. “F735B” to “F725A/B,” “F737B” to “F727A/B,” “F765C” to “F729A/B,” and “F767C” to “F731A/B/C/D,” and revised quantities and descriptions in response to RAI 6.2-200.
70.	T3.9-8, P25 Chilled Water System Valves	Revised in response to RAI 3.9-251.
71.	T3.9-8, U50 and P51	Added missing valve numbers and quantities for completeness.
72.	T3.9-8, Notes g17 and g18	Notes deleted in response to RAI 3.9-251.
73.	T3.9-9 to T3.9-12	Tables revised to reflect Tier 2* designation in response to RAI 3.9-253.
74.	F3.9-2	Figure revised to reflect updated reactor drain line design.
75.	F3.9-3	Figure revised to reflect updated reactor drain line design.

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76.	F3.9-7	Figure revised to reflect updated reactor drain line design.
77.	S3.10, Item (2)c	Added “(R 1993)” to IEEE-344-1987 for consistency with Tier 2, Table 1.9-22.
78.	S3.10, Items (3)a and (3)c	Deleted years from ASME code references. The applicable versions/years are listed in Tier 2, Table 1.9-22.
79.	S3.10, Item (3)b	Added applicable version/year to NQA-1 reference and corrected applicable version/year for NQA-1a reference, consistent with Tier 2, Table 1.9-22.
80.	S3.10, third-to-last paragraph and S3.10.1.2	Corrected references to Tables 3.9-1 and 3.9-2.
81.	S3.10.1.1, 1 st and 4 th paragraphs	Paragraphs revised to reflect Tier 2* designation in response to RAI 3.10-9.
82.	S3.11.1.1, Item (2)a	Revised item in response to RAI 3.11-30.
83.	S3.11.1.1, Item (2)e	Added footnote stating “Except that duty cycle is 72 hours.” in response to RAI 8.3-64.
84.	S3.11.1.1, Item (2)h	Added “(R 2006)” to IEEE-638-1992 for consistency with Tier 2, Table 1.9-22.
85.	S3.11.1.1, Item (2)t	Corrected title of reference.
86.	S3.11.1.1, Item (3)a	Deleted year from ASME code reference. The applicable versions/years are listed in Tier 2, Table 1.9-22.
87.	S3.11.1.1, Item (3)b	Added applicable version/year to NQA-1 reference and corrected applicable version/year for NQA-1a reference, consistent with Tier 2, Table 1.9-22.
88.	S3.11.1.1, new Items (5) and (6)	Added new items in response to RAI 3.11-35.
89.	S3.11.1.3, Post-Accident Conditions	Corrected definition.
90.	S3.11.3.1, 5th para, new 2nd sentence	Added new sentence in response to RAI 3.11-38.
91.	S3.11.3.1, “Radiation,” 2nd para	Revised paragraph in response to RAI 3.11-26 S01.

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92.	S3.11.4.1, 5th paragraph	Deleted year from ASME code reference. The applicable versions/years are listed in Tier 2, Table 1.9-22.
93.	S3.11.4.1, 8th para	Changed first sentence in response to RAI 3.11-31.
94.	S3.11.4.1, paragraph 12 and new paragraphs 13 and 14	Revised paragraph 12 and added paragraphs 13 and 14 in response to RAI 8.3-64.
95.	S3.11.6, 4th and 5th para.	Deleted 4th paragraph and 1st sentence of 5th paragraph in response to RAI 3.11-23.
96.	S3.11.8, Reference 3.11-6	Added reference in response to RAI 8.3-64 S01.
97.	T3.11-1, B21	Revised system name, RPV quantities, and added "Feed Piping Diff Pressure Transmitter" and "Steam Line Flow Transmitter" in response to RAI 7.8-8.
98.	T3.11-1, B21, Temperature element in DPV/SRV Discharge	Changed quantity to 18 for accuracy.
99.	T3.11-1, B21, MSIV-Outboard	Changed "RB to "ST" since the outboard MSIVs are in the Steam Tunnel.
100.	T3.11-1, B21, Feedwater Isolation Valve	Changed quantity to 8 for accuracy.
101.	T3.11-1, B21	Deleted RPV Temperature Elements in the reactor building since all RPV temperature elements are in the containment vessel.
102.	T3.11-1, B32, Condensate Drain Temperature Element	Changed quantity to 4 for accuracy.
103.	T3.11-1, B32	Revised component name from "Equipment Storage Pool Connections" to "Pool Cross-Connect Valves" in response to RAI 7.1-140.
104.	T3.11-1, C11	Added "C11 Rod Control and Information System" in response to RAI 7.8-8.
105.	T3.11-1, C12	Added "High Pressure CRD Makeup Line Isolation Valves" in response to RAI 21.6-103.
106.	T3.11-1, C12	Added "Backup Scram Valve Solenoids" entry in response to RAI 16.2-135 S01.
107.	T3.11-1, C31	Added "C31 Feedwater Control System" in response to RAI 7.8-8.

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108.	T3.11-1, C41	Delete “RPV Isolation” valve since these valves are manual and are not in the EQ program.
109.	T3.11-1, C41, Isolation Check Valves and Injection Shutoff Valves	Changed Required Operation Time to 100 days for accuracy.
110.	T3.11-1, C41, Accumulator Pressure Instrumentation	Changed quantity to 8 for accuracy.
111.	T3.11-1, C51 Detector and Tube Assembly	Changed quantity from “81” to “All” since all neutron detectors are in the EQ program.
112.	T3.11-1, C61	Revised system name in response to RAI 7.8-8.
113.	T3.11-1, C61, C63, H11, H12, and Note 4	Changed Qualification Programs for Rows C61, C63, H11 and H12 and added “C” to Note 4 in response to RAI 3.11-33.
114.	T3.11-1, C72	Added “C72 Diverse Protection System” in response to RAI 7.8-8.
115.	T3.11-1, E50, GDCS Pool Level Instrumentation	Changed quantity to 12 for accuracy.
116.	T3.11-1, G31	Quantities revised for rows “Mid-vessel Flow Instrumentation” to “Overboard Temperature Instrumentation” in response to RAI 7.8-8.
117.	T3.11-1, G21	Quantities revised for “IC/PCCS Pool Level Instrumentation” in response to RAI 7.8-8.
118.	T3.11-1, G21, G31, P10, P25, P51 and P54	Changed Required Operation Time to 100 Days for isolation valves, for accuracy.
119.	T3.11-1, N21	Added “N21 Condensate and Feedwater System” in response to RAI 7.8-8.
120.	T3.11-1, R11	Deleted system R11 since it is nonsafety-related.
121.	T3.11-1, R31, Conduit, Cable Trays and Supports	Add “FB” to location column since there are conduit, cable trays and supports in the fuel building.
122.	T3.11-1, R41	Deleted system R41 since it is nonsafety-related.
123.	T3.11-1, T62	Added entry for containment isolation valves, for completeness.

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124.	T3.11-1, System U77	Changed “CRHA Smoke Exhaust Intake Isolation Dampers” to “CRHA Smoke Purge Intake Isolation Dampers,” and changed “CRHA Smoke Exhaust Output Isolation Dampers” to “CRHA Smoke Purge Exhaust Isolation Dampers” for consistency.