

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Global Changes For Consistency

Item	Description of Change
1	Replaced “Category/Class 1E” and “IEEE Class 1E” with “safety-related” and “non-Class 1E” with “nonsafety-related.”
2	Replaced “annunciate” with “alarm,” and versions there of.
3	The “Essential Distributed Control and Information System (E-DCIS)” name is changed to “Safety-Related Distributed Control and Information System (Q-DCIS), and the “Non-Essential Distributed Control and Information System (NE-DCIS)” name is changed to “Nonsafety-Related Distributed Control and Information System (N-DCIS)” for functional clarity.
4	For consistency, changed all visual commitments to read “indicated” to denote any information that is visually available to an operator.
5	Replaced “which will be taken for” to “for” in the ITAAC table introduction statements for simplicity and consistency.
6	An effort was started in the ITAAC Acceptance Criteria to denote the documentation to be available with respect to meeting the acceptance criteria
7	Added both metric and English units of values

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### DCD Tier 1, Section 1

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S1.1.1	Added “Note: Figure 1.1-1 illustrates a conceptual (i.e., example) plant layout, showing the approximate relative locations of the main buildings, but any specific site may be arranged differently.” To clarify the intent of the figure.
2	S1.1.1	Added the “(7) Service Building – houses the equipment and control facilities associated with personnel entry into the reactor building and turbine building, eating areas, radiation protection, changing rooms, shops and offices.” to this list and changed “Six” to “Seven”
3	Figure 1.1-1	Replaced the figure, and changed the title to “Example ESBWR Standard Plant General Site Plan” to clarify the intent of the figure.
4	S1.2.1, Verification of the basic configuration	Deleted the reference to motor operated valves, because the ESBWR does not have any safety-related motor operated valve.
5	S1.2.1, new definition of “alarm”	Added the definition “An <b>alarm</b> can be an auditory notification, visual indication and/or off-normal condition data recorder.” to assure consistency.
6	S1.2.1, new definition of “High Regulatory Oversight”	Added “ <b>High Regulatory Oversight</b> systems are nonsafety-related systems that provide a significant contribution to meeting the core damage frequency and containment performance goals for advanced light water reactors.”
7	S1.2.1, new definition of “indicated item or visual indication”	Added the definition “An <b>indicated</b> item or <b>visual indication</b> is any information that is visually available to an operator”.
8	S1.2.1, Division	Changed to “is the designation applied to a given safety-related system or set of components that enables the establishment and maintenance of physical, electrical and functional independence from other redundant sets of components” in the definition per RAI 7.1-46
9	S1.2.1, new definition of “manual control”	Added the definition “A <b>manual control</b> is any operation or function that can be physically initiated by an operator”

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10	S1.2.21, Item 1	Added last sentence, “For all systems with containment penetrations, ASME Section III Division 1 NE and CC requirements per design commitments shown on Table 2.15-1 are used as applicable for NDE of pressure boundary welds” to clarify NDE requirements.”

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### DCD Tier 1, Section 2.1

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.1.1, 8th para., 4 <sup>th</sup> sent.	Deleted “,which extends to the top of the core”, for clarity.
2	S2.1.1, 11th para.	Deleted “A flanged nozzle is provided in the top head for bolting on of the flange associated with the instrumentation for the initial vibration test of internals.” because it is only needed for the initial plant.
3	S2.1.1, 19 <sup>th</sup> and 20 <sup>th</sup> paragraphs	Rewrote paragraphs general description in addition to clarifying weld locations in the beltline area, capsule holder attachment, unit definition.
4	T2.1.1-2 1 <sup>st</sup> row	Removed “Subsection 2.1.1” reference so design commitment and acceptance criteria would be more specific.
5	T2.1.1-2 3 <sup>rd</sup> column	For ITAACs 1, 3, 4, 5 and 6: added “inspection report(s) confirm(s) the” to the acceptance criteria.
6	T2.1.1-2 7 <sup>th</sup> row	Removed. Not an ITAAC by definition.
7	S2.1.2	Added US Customary units as necessary throughout Section 2.1.2 to ensure that dual dimensioning is included, i.e. SI units (metric) and US Customary units.
8	S2.1.2, 2 <sup>nd</sup> para., 2 <sup>nd</sup> sent.	Added new sentence at end of paragraph as follows, in response to a utility comment and to be consistent with Tier 2 Table 5.4-1:  “The MSL minimum constructed combined volume for all four MSLs is 135 m <sup>3</sup> .”
9	S2.1.2, 5 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Added “are designated as ADS SRVs” after “Ten of the SRVs”. Changed from “.....Depressurization mode, transport steam.....” to “.....Depressurization mode and transport steam.....” to be consistent with Tier 2 Subsection 5.2.2.2.2.
10	S2.1.2, 5 <sup>th</sup> para., 3 <sup>rd</sup> sent.	Changed from “The remaining eight SRVs, which operate in the overpressure safety mode, are arranged into two groups of four valves” to “The remaining eight SRVs are designated as Non-ADS SRVs, which operate in the overpressure safety

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		mode” to be consistent with Tier 2 Subsection 5.2.2.2.2.
11	S2.1.2, 5 <sup>th</sup> para., 4 <sup>th</sup> sent.	Changed from “Each group is connected to a horizontal header that has a rupture disc at each end” to “Each Non-ADS SRV discharges through its individual discharge stack that has a rupture disc at the end” to be consistent with Tier 2 Subsection 5.2.2.2.2.
12	S2.1.2, 5 <sup>th</sup> para., 5 <sup>th</sup> sent.	Changed from “Each header has a discharge line that terminates in a quencher in the SP” to “Each discharge stack has a drain line that drains condensed steam leakage to the suppression pool” to be consistent with Tier 2 Subsection 5.2.2.2.2.
13	S2.1.2, 5 <sup>th</sup> para., 6 <sup>th</sup> sent.	Changed from “These valves either discharge directly into the drywell or through the discharge line to the SP” to “The Non-ADS SRVs discharge through the rupture discs into the drywell” to be consistent with Tier 2 Subsection 5.2.2.2.2.
14	S2.1.2, 5 <sup>th</sup> para.	Added new sentence as follows to be consistent with Tier 2 Subsection 5.2.2.2.2:  “The opening time for the SRVs from when the pressure exceeds the valve set pressure to when the valve is fully open shall be less than or equal to 1.7 seconds.”
15	S2.1.2, 8 <sup>th</sup> para.	Added new sentence as follows to be consistent with Tier 2 Table 6.3-4:  “When actuated by an initiator, the booster assembly opens the DPV in less than or equal to 0.45 seconds with an inlet pressure of 6.89 Mpa gauge (1000 psig.) or greater.”
16	S2.1.2, 8 <sup>th</sup> para.	Added new sentence as follows to be consistent with Tier 2 Subsection 6.3.2.8.2:  “Four DPVs are attached to stub tubes off of the RPV and four DPVs are attached to the main steam lines.”
17	S2.1.2, 9 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Replaced “steam line” with “turbine inlet” to be consistent with Tier 2 Table 5.2-6.
18	S2.1.2, 9 <sup>th</sup> para.	Added new 3 <sup>rd</sup> sentence as follows:  “Low RPV water level, low turbine inlet pressure (RUN mode), low main condenser vacuum (RUN mode) and high steam line flow provide signals to close the MSIVs”, to be consistent with Tier 2 Table 5.2-6.
19	S2.1.2, 9 <sup>th</sup> para.	Added new sentence as follows to be consistent with Tier 2 Subsection 7.7.1.2.1:  “The RPV water level instrumentation considers the effects of dissolved non-condensable gases in the RPV water instrument

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		lines.”
20	S2.1.2, 9 <sup>th</sup> para.	Add new 10 <sup>th</sup> paragraph as follows to be consistent with Tier 2 Subsection 7.3.1.1:  “The mechanical portion of each division of the safety-related NBS instrumentation located in the Reactor Building outside the drywell is physically separated from the other divisions.”
21	S2.1.2, 13 <sup>th</sup> para., 1 <sup>st</sup> sent.	Replaced “testable” with “outboard isolation” and replaced “motor operated isolation valve” with “seismic interface restraint” to be consistent with Tier 2 Subsection 5.4.9.2.
22	S2.1.2, 13 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Deleted second sentence to be consistent with Tier 2 Subsection 5.4.9.2.
23	S2.1.2, 13 <sup>th</sup> para., 3 <sup>rd</sup> sent.	Replaced “motor operated” with “isolation shutoff” to be consistent with Tier 2 Subsection 5.4.9.2.
24	S2.1.2, 14 <sup>th</sup> para.	Added new sentence as follows, in response to NRC comment:  “An accumulator assists MSIV closure when the make-up pneumatic supply is not available.”
25	S2.1.2, 14 <sup>th</sup> para.	Added new sentence as follows, to be consistent with Tier 2 Table 5.4-1:  “The MSIV closes in less than or equal to 5 seconds and greater than or equal to 3 seconds when nitrogen or air is admitted to the valve actuator.”
26	S2.1.2, 14 <sup>th</sup> para.	Added new sentence as follows, to be consistent with Tier 2 Table 5.4-1:  “When all MSIVs are closed, the combined leakage through the MSIVs for all four MSLs is less than or equal to 66.1 liters (17.4 gallons) per minute at standard temperature of 20°C (68°F) and pressure with the differential pressure across the MSIV equal to or greater than 0.269 MPaD (39 psid).”
27	S2.1.2, 15 <sup>th</sup> para.	Added new sentences as follows to be consistent with Tier 2 Table 6.3-1:  “The ADS logic is automatically initiated when a low reactor water level signal is present. When a low water level signal is present, the Confirm ECCS-LOCA Signal timer initiates and continues to time out in the continued presence of the RPV low water level signal. The time delay is less than or equal to 10 seconds. Upon time out of the Confirm ECCS-LOCA

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		<p>Signal timer, an actuation signal is generated to the Group 1 ADS SRVs and the Group 2 ADS timer initiates and continues to time out. Upon time out, an actuation signal is generated to the Group 2 ADS SRVs. The time delay is less than or equal to 10 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the Group 1 DPV timer initiates and continues to time out. Upon time out, an actuation signal is generated to the Group 1 DPVs. The time delay is less than or equal to 50 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the Group 2 DPV timer initiates and continues to time out. Upon time out, an actuation signal is generated to the Group 2 DPVs. The time delay is less than or equal to 100 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the Group 3 DPV timer initiates and continues to time out. Upon time out, an actuation signal is generated to the Group 3 DPVs. The time delay is less than or equal to 150 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the Group 4 DPV timer initiates and continues to time out. Upon time out, an actuation signal is generated to the Group 4 DPVs. The time delay is less than or equal to 200 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the GDCS Injection Squib Valve timer initiates and continues to time out. The time delay is less than or equal to 150 seconds. Upon time out of the Confirm ECCS-LOCA Signal timer, the GDCS Equalization Line Squib Valve timer initiates and continues to time out. The time delay is less than or equal to 30 minutes. Upon manual actuation of the GDCS Equalization Line Squib Valve initiation logic, concurrent with an RPV low-pressure signal, the GDCS Manual Equalization Line Squib Valve timer initiates and continues to time out. The time delay is less than or equal to 30 minutes.”</p>
28	S2.1.2, pg 2.1-14, new para.	<p>Added:</p> <p>For ATWS mitigation, ADS is inhibited automatically, based on the following signals.</p> <ul style="list-style-type: none"> <li>• A coincident low RPV water level signal and Average Power Range Monitor (APRM) ATWS permissive signal (i.e., APRM signal above a specified setpoint) from the Neutron Monitoring System (NMS); and</li> <li>• A coincident high RPV pressure and APRM ATWS permissive signal persisting for 60 seconds.</li> <li>• There are controls in the MCR for the manual inhibit of the ADS under ATWS conditions.</li> </ul>
29	S2.1.2, 15 <sup>th</sup> para.	Added new sentence as follows to be consistent with Tier 2

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		Subsection 5.2.2.2.2: “An accumulator opens the ADS-SRV when the pneumatic supply is not available.”
30	S2.1.2, 20 <sup>th</sup> para., 1 <sup>st</sup> sent.	Replaced “Class 1E” with “safety-related” in two places to provide clarity and consistency in terminology with other parts of the DCD.
31	S2.1.2, 20 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Replaced “Class 1E” with “safety-related” in two places and replaced “non Class 1E” with “nonsafety-related” in one place to provide clarity and consistency in terminology with other parts of the DCD.
32	S2.1.2, 21 <sup>st</sup> para.	Changed from “The valves that have active safety-related functions to open, close, or both open and close, shall be designed to maintain containment integrity by providing containment isolation functions under .....” to “The feedwater isolation valves shown on Figure 2.1.2-2 have an active safety-related function to close under .....”, to be consistent with Tier 2 Figure 5.1-2.
33	S2.1.2, 22 <sup>nd</sup> para.	Deleted “positive acting outboard” and added “shown on Figure 2.1.2-2 after “check valves” to be consistent with Tier 2 Subsection 5.4.9.2 and Figure 5.1-2.
34	S2.1.2, 25 <sup>th</sup> para.	Added new sentence, “RPV level sensors are shown on Figure 2.1.2-4” in response to RAI 14.3-78.
35	S2.1.2, 25 <sup>th</sup> para.	<p>Added new paragraphs as follows in response to RAI 14.3-79:</p> <p>Reactor pressure is sensed by 12 safety-related transmitters (3 in each of 4 Divisions) and 8 nonsafety-related transmitters (2 in each of 4 Groups).</p> <p>RPV metal temperature is sensed by 2 nonsafety-related RPV Head Flange sensors (1 in each of 2 Groups), 2 nonsafety-related RPV Shell Flange sensors (1 in each of 2 Groups) and 2 nonsafety-related RPV Bottom Head sensors (1 in each of 2 Groups).</p> <p>Drywell pressure is sensed by 4 nonsafety-related wide range transmitters (1 in each of 4 Groups), 2 safety-related wide range transmitters (1 in each of 2 Divisions), 4 safety-related narrow range transmitters (1 in each of 4 Divisions) and 2 safety-related differential pressure transmitters (drywell/wetwell) (1 in each of 2 Divisions).</p> <p>Main condenser vacuum is sensed by 4 safety-related transmitters (1 in each of 4 Divisions).</p> <p>Turbine inlet pressure is sensed by 4 safety-related transmitters</p>



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		<p>(1 in each of 4 Divisions).</p> <p>With the exception of turbine inlet pressure and main condenser vacuum sensors located in the Turbine Building, the NBS instrumentation is located in the drywell, steam tunnel and the Reactor Building.</p>
36	S2.1.2, 26 <sup>th</sup> para.	<p>Added new paragraph as follows to be consistent with Tier 2 Subsection 7.4.2:</p> <p>“There are displays and controls in the Remote Shutdown System for the SRVs and RPV level and pressure.”</p>
37	S2.1.2, 27 <sup>th</sup> para.	Deleted “which will be undertaken” for clarity.
38	T2.1.2-1, SRV Capacities, 3 <sup>rd</sup> and 4 <sup>th</sup> columns.	<p>Combined the 3<sup>rd</sup> and 4<sup>th</sup> columns and replaced the heading with the following to reflect updated SRV design:</p> <p>“ASME Rated Capacity at Analytical Lift Pressure”</p> <p>For the “Non-ADS SRV”, combined the 3<sup>rd</sup> and 4<sup>th</sup> columns and replaced the information with the following:</p> <p>“Valve size, discharge capacity and lift setpoint(s) are selected based upon analysis of the ATWS event response requirements, the AOO lift avoidance commitment, and the containment design parameters”</p> <p>For the “ADS-SRV”, combined the 3<sup>rd</sup> and 4<sup>th</sup> columns and replaced the information with the following:</p> <p>“Valve size, discharge capacity and lift setpoint(s) are selected based upon analysis of the ATWS, MSIV Full Closure and ECCS events response requirements, the AOO lift avoidance commitment, and the containment design parameters”</p>
39	T2.1.2-1, DPV Capacities, 3 <sup>rd</sup> column.	<p>Replaced the 3<sup>rd</sup> column heading with the following to reflect updated SRV design:</p> <p>“Rated Capacity”</p> <p>For the DPV, replaced the information in the 3<sup>rd</sup> column with the following:</p> <p>“Valve size and discharge capacity are selected based upon analysis requirements for the ECCS events responses and the containment design parameters”</p>
40	T2.1.2-1, Note (1)	Deleted “per” and replaced with “is established by overpressure analysis performed in accordance with” for clarity.
41	T2.1.2-1, Note (2)	Added “is established only” after “capacity” and added “vessel” before “overpressure” for clarity.

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42	T2.1.2-2, ITAAC 4	<p>Changed the information in the “Inspections, Tests, Analyses” column to read as follows, in response to a utility comment:</p> <p>“Inspections of the as-built installation of the MSL flow instrumentation will be conducted to verify that it meets the design”</p> <p>Changed the information in the “Acceptance Criteria” column to read as follows, in response to a utility comment:</p> <p>“The as-built MSL flow measurement instrument lines match the instrument line design drawings and tolerances”</p>
43	T2.1.2-2, ITAAC 8	<p>Under “Design Commitment”, deleted the second sentence in response to a utility comment.</p> <p>Under “Inspections, Tests, Analyses” second sentence, replaced “Tests or type tests” with “Type testing”, replaced “under” with “in accordance with the” and replaced “basis differential pressure, flow and temperature conditions” with “and purchase specifications”, in response to a utility comment.</p>
44	T2.1.2-2, ITAAC 9	Under “Design Commitment” and “Acceptance Criteria”, deleted “(one atmosphere absolute pressure)”, for clarity.
45	T2.1.2-2, ITAAC 10	Modified to be consistent with the changes to Table 2.1.2-1.
46	T2.1.2-2, ITAAC 12	Under “Acceptance Criteria”, deleted “concurrent with a high drywell pressure signal” to be consistent with Tier 2 Table 6.3-1 and deleted all information following item i.
47	T2.1.2-2, ITAAC 11	Separated SRVs and DPVs into separate items.
48	T2.1.2-2, ITAAC 14	Under “Design Commitment”, replaced “either of two initiators” with “an initiator” to be consistent with Tier 2 Subsection 6.3.2.8.2.
49	T2.1.2-2, ITAAC 14	Under “Inspections, Tests, Analyses”, replaced “Tests” with “Type testing”, in response to a utility comment.
50	T2.1.2-2, ITAAC 16	Under “Inspections, Tests, Analyses”, added “type” before “tests”, in response to a utility comment, and Modified to be consistent with the changes to Table 2.1.2-1.
51	T2.1.2-2, ITAAC 18	Added “(RUN mode)” after “Low main condenser vacuum”, in response to a utility comment.
52	T2.1.2-2, ITAAC 23	Under “Design Commitment”, added “outside the drywell” after “Reactor Building”, in response to a utility comment.
53	T2.1.2-2, ITAAC 24	Replaced the information in the “Design Commitment” and “Acceptance criteria” clarified and made consistent with each other.

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54	T2.1.2-2, ITAAC 24	<p>Replaced the information in the “Inspections, Tests, Analysis” column with the following, in response to a utility comment:</p> <p>“Type testing of similar valves along with analysis and engineering evaluation will be performed. Valves will be tested as part of system checkout to demonstrate functional readiness. Type testing of critical or new valves in a dedicated test facility will be performed where the function requires pressure, flow, temperature or environmental parameters that cannot be adequately simulated under normal system operating modes”</p>
55	T2.1.2-2, ITAAC 25	<p>Re-wrote the information in the “Design Commitment” column to read as follows, in response to a utility comment:</p> <p>“Check valves shown on Figure 2.1.2-2 perform a containment isolation safety-related function closing to maintain containment integrity.”</p> <p>Replaced the information in the “Inspections, Tests, Analysis” column with the following, in response to a utility comment:</p> <p>“Type testing of similar valves along with analysis and engineering evaluation will be performed. Valves will be tested as part of system checkout to demonstrate functional readiness. Type testing of critical or new valves in a dedicated test facility will be performed where the function requires pressure, flow, temperature or environmental parameters that cannot be adequately simulated under normal system operating modes”</p>
56	T2.1.2-2, ITAAC 28	<p>Added new item 28 as follows, in response to NRC comment:</p> <p>Design Commitment:</p> <p>“The MSIV accumulator assists in closing the MSIV with the drywell pressure at design pressure following failure of the pneumatic supply to the accumulator.”</p> <p>Inspections, Tests, Analyses</p> <p>“An analysis and/or type test will be performed to demonstrate the capacity of the MSIV accumulator.”</p> <p>Acceptance Criteria</p> <p>“The MSIV accumulator has the capacity to assist in closing the MSIV with the drywell pressure at design pressure.”</p>
57	F2.1.2-2	<p>Deleted swing check valves immediately downstream of motor operated isolation valves outside containment, changed containment outboard isolation valve from lift check valve to piston check valve with process-medium piston actuator, changed feedwater line isolation valves from motor operated gate valves to process-medium (pilot operated) gate valves</p>

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		and changed RPV head vent drain line from “CRW” to “EFDS”, to be consistent with Tier 2 Figure 5.1-2.
58	F2.1.2-3	Replaced with the current configuration, and added official notification {{{Contains Security-Related Information - Withhold Under 10 CFR 2.390}}}
59	F2.1.2-4	Updated water level instrumentation on Figure 2.1.2-4 to show the number of transmitters used for each range, the number of transmitters used per group or division and which transmitters are safety-related in response to RAI 14.3-78.

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<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.2.1, 4 <sup>th</sup> para., 3 <sup>rd</sup> bullet	Replaced the word “Non-Essential” to “N-“ before the acronym “DCIS” .
2	S2.2.1, 4 <sup>th</sup> para., 9 <sup>th</sup> bullet	Replaced the word “Non-Essential” to “N-“ before the acronym “DCIS”.  Added the following sentence: “Upon receipt of a SCCRI signal, the Diverse Protection System (DPS) will initiate a Select Rod Insert (SRI).” This change was made because of a design change.
3	S2.2.1, 6 <sup>th</sup> para., 1 <sup>st</sup> sent.	Replaced the words “non-Class 1E” to “nonsafety-related” before the word “uninterruptible” because of engineering clarification an to be consistent with Tier 2.
4	S2.2.1, “Inspections, Tests, Analyses and Acceptance Criteria”, 1 <sup>st</sup> para., 1 <sup>st</sup> sent.	Replaced the acronym “RCIS” with “RC&IS”.
5	T2.2.1-1, 6 <sup>th</sup> item, 1 <sup>st</sup> col., 1 <sup>st</sup> sent.	Replaced the “NE-” with “N-“ before the acronym “DCIS”
6	T2.2.1-1, 8 <sup>th</sup> item, 1 <sup>st</sup> col., 1 <sup>st</sup> sent.	Replaced the “NE-” with “N-“ before the acronym “DCIS”
7	T2.2.1-1, 9 <sup>th</sup> item, 1 <sup>st</sup> col., 1 <sup>st</sup> sent.	Replaced the “NE-” with “N-“ before the acronym “DCIS”
8	T2.2.1-1, 9 <sup>th</sup> item, 2 <sup>nd</sup> col., 1 <sup>st</sup> sent.	Added the words “to the N-DCIS and Neutron Monitoring System” to the end of the sentence because of a name change and clarification.
9	T2.2.1-1, 12 <sup>th</sup> item, 1 <sup>st</sup> col., 1 <sup>st</sup> sent.	In two instances replaced “non-Class 1E” with “nonsafety-related”
10	T2.2.1-1, 12 <sup>th</sup> item, 2 <sup>nd</sup> col., 1 <sup>st</sup> sent.	Replaced the words “non-Class 1E” with “nonsafety-related”
11	F2.2.1-1	Replaced the word “Non-Essential” with “N-”, “E-DCIS” to “Q-DCIS” and converted roman numerals to Arabic numerals in “Division 1” and “Division 2”.

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<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
12	S2.2.3, 1	Replaced the word “Non-Essential” with “Nonsafety-related” and inserted “feedwater” before “control”. Replaced the word “interface” with the words “system logic functional” before diagram.
13	S2.2.3, 2 <sup>nd</sup> para., 1 <sup>st</sup> sent.	Replaced the words “microprocessor-based” with the word “redundant”
14	S2.2.3, 4 <sup>th</sup> para., 1 <sup>st</sup> sent.	Replaced the terms “Level 4” with “Low Level” and “Level 7” with “High Level”.
15	S2.2.3, 4 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Changed the word “alarm” to “alarmed”. Deleted the words “occurs in the control room to alert the operator” from the end of the sentence.
16	S2.2.3, 6 <sup>th</sup> para., 1 <sup>st</sup> sent.	Changed the term “high” to “high-high”. Deleted the number “8” after the word “Level”.
17	S2.2.3, 6 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Deleted this sentence
18	S2.2.3, 7 <sup>th</sup> para., 1 <sup>st</sup> sent.	Changed the acronym “ATWS” to “DPS”. Deleted the words “logic cards of Safety System Logic and Control (SSLC) System”.
19	S2.2.3, 7 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Deleted this sentence in its entirety
20	S2.2.3, 8 <sup>th</sup> para., 1 <sup>st</sup> sent.	Deleted this sentence in its entirety
21	S2.2.3, 8 <sup>th</sup> para., new 1 <sup>st</sup> sent.	Changed “main control room” to the acronym “MCR”
22	S2.2.3, 8 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Added the following at the end of the second sentence “(See Table 2.2.3-1)”
23	S2.2.3, 8 <sup>th</sup> para.	Deleted this paragraph in its entirety
24	S2.2.3, “Inspections, Tests, Analyses and Acceptance Criteria”, 1 <sup>st</sup> para., 1 <sup>st</sup> sent.	Changed the table reference from “2.2.3-1” to “2.2.3-2”

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
25	T2.2.3-1, 2 <sup>nd</sup> col., 6 <sup>th</sup> row	Inserted the acronym “(PAS)” after the word “System” and changed the acronym “PGCS” to “PAS”.
26	T2.2.3-2, 3 <sup>rd</sup> col., 2 <sup>nd</sup> row, list item 1	Inserted the words “A test confirms that” at the start of the sentence for clarification.
27	T2.2.3-2, 3 <sup>rd</sup> col., 2 <sup>nd</sup> row, list item 2	Inserted the words “A test confirms that” at the start of the sentence for clarification.
28	T2.2.3-2, 3 <sup>rd</sup> col., 2 <sup>nd</sup> row, list item 3	Inserted the words “A test confirms that” at the start of the sentence for clarification.
29	T2.2.3-2, 2 <sup>nd</sup> col., 5 <sup>th</sup> row, list item 4	Inserted the words “and tests” after the word “Inspections” for clarification.
30	T2.2.3-2, 3 <sup>rd</sup> col., 5 <sup>th</sup> row, list item 4	Replaced this list item with: “Inspections and tests confirm that FWCS is configured correctly, so that process variables from other systems can be monitored and the FWCS control demands and trip signals can be sent to other systems. The system interface function is confirmed by the above.” This change was made for clarification.
31	T2.2.3-2, 1 <sup>st</sup> col., 6 <sup>th</sup> row, list item 5	Replaced the words “indications and controls” with the words “controls, monitoring and alarms” for clarification.
32	T2.2.3-2, 2 <sup>nd</sup> col., 6 <sup>th</sup> row, list item 5	Inserted the words “and test” after the word “Inspections”. Replaced the words “indications and controls” with the words “controls, monitoring and alarms”. These changes were made for clarification.
33	T2.2.3-2, 3 <sup>rd</sup> col., 6 <sup>th</sup> row, list item 5	Replaced the words “Indications and controls” with “Inspections and tests confirm that”. Added the words “controls, monitoring and alarms” before the word “exist”. These changes were made for clarification.
34	S2.2.4, 4 <sup>th</sup> para.	Added “redundant shut-off”. Replaced “valve” with “valves”.
35	S2.2.4, 5 <sup>th</sup> para.	Added isolation of RWCU/SDC on ATWS mitigation SLC start.
36	S2.2.4, 8 <sup>th</sup> para., 1 <sup>st</sup> sent.	Added “redundant”.

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### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
37	S2.2.4, 8 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Added “This prevents nitrogen from entering the reactor vessel after boron injection is complete.”
38	T2.2.4-2, 2.f	Added SSLC/ESF and DPS LOCA signal start test
39	T2.2.4-2, 2.g	Added RWCU/SLC isolation test on SLC start for ATWS
40	T2.2.4-2, 9.	Added logic for series shut-off valve test.
41	T2.2.4-2, 10.	Added IEEE 603 requirement.
42	S2.2.4	Revised the instrumentation and controls to be more specific, in response to RAI 14.3-83
43	T2.2.4-1	Clarified that the approximate initial injection flow rate in on a per loop basis. RAI 14.3-84
44	T2.2.4-2, new Items 3.e and 3.f	Added manual initiation of the SLC from the main control room, and added automatic initiation of both trains of the SLC system during an ATWS event, in response to RAI 14.3-84.
45	S2.2.5, paragraph 11 after list	Added new paragraph 11 for setpoint requirements
46	T2.2.5-1, Item 5	Revised Table to incorporate changes/ additions to ITAAC items per response to RAIs 7.1-13, 14, and 30
47	F2.2.5-1	Figure revised to indicate final network structure provided by NMS SRNM logic.
48	F2.2.5-2	Figure revised to indicate final network structure provided by NMS PRNM logic.
49	S2.2.6	Various editorial changes, i.e., used the terms “indicated,” “Control,” “Q-DCIS,” “N-DCIS”, and “1” and “2” for divisions.
50	T2.2.6-1	Deleted “touch screen” in Design Commitment Item 2. Added item 4 as enhancement to the ITAAC.
51	S2.2.7; Bypasses	Added bypasses for Reactor Water Level 8 and High Condenser Pressure, added "increasing" and "decreasing" to respective reactor level trips.



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### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
52	S2.2.7; Status Alarms	Changed Roman numerals to Arabic for Division designations
53	Table 2.2.7-1, ITAACs 1, 3, 4, 5, 6, 7, 10, 11, and 12	Revised Table to incorporate changes/ additions to ITAAC items per response to RAIs 7.1-13, 14, 16, 24, and 30
54	F2.2.7-1	Revised to delete reference to SSLC and clarified the title.
55	S2.2.8, old 1 <sup>st</sup> paragraph	Deleted words surrounding classification as a nonsafety-related system and for consistency inserted new second paragraph as stipulated in Item Two below.
56	S2.2.8, new 2 <sup>nd</sup> paragraph	Inserted new second paragraph between old first paragraph and old second paragraph in order to be consistent with other DCD Tier 1, Section Two sections. Said new paragraph replaces words deleted in old paragraph one as stipulated in Item One above.
57	S2.2.8, old 2 <sup>nd</sup> paragraph	PAS stands for Plant Automation System and therefore the word “system” is redundant and not required.
58	S2.2.8, old 3 <sup>rd</sup> paragraph	Deleted the paragraph because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
59	S2.2.8, old 4 <sup>th</sup> paragraph	Deleted the paragraph because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
60	S2.2.8, old 5 <sup>th</sup> paragraph	Deleted the paragraph because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
61	Figure 2.2.8-1	Deleted the figure because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
62	T02.02.09-01, Item 1, Column 3	Rewritten to include documentation.
63	T02.02.09-01, Item 2, Column 3	Rewritten to include documentation.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
64	T02.02.09-01, Item 3, Column 3	Rewritten to include documentation.
65	F02.02.09-01	Changed Figure to be consistent with Tier 2 Figure 7.7-6
66	S2.2.10, Title	Revised title per design change.
67	S2.2.10, old paragraphs	Due to an NRC audit finding in NOV2006, DCD, Tier Two, Revision Two, Section 7.1 and Section 7.9 went through a total change that resulted in improved clarity and completeness. These old paragraphs of Section 2.2.10 were deleted, as they were too detailed and new clear, concise paragraphs were added.
68	S2.2.10, new paragraphs	Inserted new paragraphs based upon total change of DCD, Tier Two, Revision Two, Section 7.1 and Section 7.9 in order to improve clarity of Subsection 2.2.10. Part of this update was to strive to gain consistency with the sister Subsection 2.2.11 (N-DCIS).
69	old Table 2.2.10-1	Deleted, because the ITAAC are covered by the ITAAC from other referenced systems.
70	new Table 2.2.10-1	New table provides the reference systems that contain the ITAAC.
71	Figure 2.2.10-1	Deleted the figure because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
72	S2.2.11, Title	Revised title per design change.
73	S2.2.11	Replaced all paragraphs because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1. Also, most of the old information was not related to plant safety.
74	Table 2.2.11-1	Deleted the table because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.
75	Figure 2.2.11-1	Deleted the figure because it represented a preliminary design that was highly likely to change, and thus, was not appropriate for a Tier 1.

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### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
76	S2.2.12, 2 <sup>nd</sup> paragraph	Added Main steamline drain lines isolation to be consistent with Tier 2.
77	S2.2.12, 2 <sup>nd</sup> paragraph	Added RWCU/SDC sampling lines isolation to be consistent with Tier 2.
78	S2.2.12, 2 <sup>nd</sup> paragraph	Clarified that only the FAPCS suction lines from the GDSCS pools are isolated to be consistent with Tier 2.
79	S2.2.12, 2 <sup>nd</sup> paragraph	Deleted Fission products sampling line isolation to be consistent with Tier 2. The RWCU/SDC sampling lines replaced this.
80	S2.2.12, 2 <sup>nd</sup> paragraph	Added Feedwater system process lines isolation to be consistent with Tier 2.
81	S2.2.12, 4 <sup>th</sup> paragraph	Clarified that the LD&IS functions are performed in two separate safety-related platforms to be consistent with Tier 2.
82	S2.2.12, 5 <sup>th</sup> paragraph	Clarified that loss of electrical power to one LD&IS divisional logic channel initiates a channel trip to be consistent with Tier 2 and ITAAC 9.
83	S2.2.12, 5 <sup>th</sup> paragraph	Added that the divisional LD&IS logic channels and associated sensors are powered from safety related divisional power to be consistent with Tier 2 and ITAAC 10.
84	S2.2.12, 6 <sup>th</sup> paragraph	Added that electrical, communication and physical independence is provided to be consistent with Tier 2 and ITAAC 11
85	S2.2.12, 10 <sup>th</sup> paragraph	Added that the LD&IS based on the GE setpoint methodology approved by NRC to be consistent with Tier 2 and ITAAC 12.
86	S2.2.12, 11 <sup>th</sup> paragraph	Changed “control switches” to “controls” to avoid confusion. Control switches are often associated with hard switches. ESBWR will have both hard and soft switches which will be defined in the detailed HFE design process.
87	S2.2.12, 12 <sup>th</sup> paragraph	Changed “NE-DCIS” to “N-DCIS” and changed “displayed” to “indicated” to be consistent with Tier 2
88	T2.2.12-1	Revised descriptions to be consistent with Tier 2

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### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
89	T2.2.12-2	Revised ITAAC 1, 2, 3, 6, 8, 9 and 10 and added ITAAC 11 and 12. This is to be consistent with the generic ITAACs for IEEE 603. This will also be consistent with the changes to Tier 1 and Tier 2.
90	F2.2.12-1	Revised basic configuration figure to be consistent with Tier 2.
91	Title.	Updated to reflect SSLC/ESF designation.
92	S2.2.13, 2 <sup>nd</sup> para.	Incorporated description of SSLC/ESF logic design
93	S2.2.13, 3 <sup>rd</sup> para.	Relocated. To new 7 <sup>th</sup> para.
94	S2.2.13, 4 <sup>th</sup> para	Added control room habitability discussion. Clarified LD&IS –SSLC/ESF scope. Deleted ATWS/SLC discussion based on SSLC/ESF scope. (ATWS/SLC addressed in 2.2.14)
95	S2.2.13, 5 <sup>th</sup> & 6 <sup>th</sup> para	Level of detail discussion on ESF systems
96	S2.2.13, 8 <sup>th</sup> para	Discussion of IEEE 603 isolation. Level list manual operation description and alarm displays.
97	T2.2.13-1	Content unchanged with exception of setpoints/setpoint methodology- added as ITAAC item 9. RAI 7.2-36 incorporated by reference.
98	F2.2.13-1	Replaced with updated figure from S7.3. Figure update to show general (non-vendor specific) logic processing with VDUs .
99	S2.2.14, old 2 <sup>nd</sup> para.	Added discussion of ADS inhibit during ATWS conditions.
100	S2.2.14, old 3 <sup>rd</sup> para, 4 <sup>th</sup> and 5 <sup>th</sup> bullets para.	Added new DPS scope logic for SRI and feedwater runback.
101	S2.2.14, old 4 <sup>th</sup> para.	Added manual controls discussion
102	T2.2.14-1, 2.	Expanded signal initiation discussion
103	T2.2.14-1, 4.	Expanded IEEE 603 requirement.
104	T2.2.14-1, 5.	Clarified IEEE 603 requirement.
105	T2.2.14-1, 6.	Added ITAAC for alarms/controls

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### DCD Tier 1, Section 2.2

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
106	T2.2.14-1, 7	Added setpoints/setpoint methodology- added as ITAAC item 9. RAI 7.2-36 incorporated by reference.
107	T2.2.14-1, 8	ITAAC in response to RAI 7.8-5
108	T2.2.14-1, 9.	ITAAC in response to RAI 14.3-94
109	F2.2.14-1	Replaced figure with current version

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### DCD Tier 1, Section 2.3

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.3.1, 1 <sup>st</sup> para.	Deleted reference to sampling skids.
2	S2.3.1	Added new sentence regarding indications and alarms on PRMS signal conditioning units.
3	S2.3.1, bullets describing each PRMS channel	Rewritten with additional information where necessary, for clarity.
4	T2.3.1-1	New table added for clarity, as key to Radiation Monitors shown in Figure 2.3.1-1.
5	T2.3.1-2	Original table T2.3.1-1 renumbered, and rewritten for clarity.
6	F2.3.1-1	Revised note to reflect addition of new Table 2.3.1-1.
7	T2.3.2-1	New table added to provide location of ARMS monitors.
8	T2.3.2-2	Original table T2.3.2-1 renumbered, and rewritten for clarity.

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### DCD Tier 1, Section 2.4

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or fig)	<b>Description of Change</b>
1	T2.4.1-1, Item 1	Additional details provided for safety class and seismic category.
2	T2.4.1-1, Column 3	Editorial Changes
3	T2.4.1-1, Column 2	Editorial Changes
4	T2.4.1-1, Item 17, Column 3	Updated liquid inventory value. Replaced “4.98 m <sup>3</sup> ” with “13.88 m <sup>3</sup> (490 ft <sup>3</sup> )”
5	T2.4.1-1, new Item 20	Additional details provided, in response to RAI 14.3-77.
6	S02.04.02, 1 <sup>st</sup> para.	Additional details provided, in response to RAI 14.3-3.
7	S02.04.02, 2 <sup>nd</sup> para.	Deleted “and the suppression pool (SP).” During severe accident GDCS pools are the only source for flooding the lower drywell.
8	S02.04.02, 3 <sup>rd</sup> para., new last sent.	Additional details provided, in response to RAI 6.3-24.
9	S02.04.02, 7 <sup>th</sup> para., 2 <sup>nd</sup> sent.	Deleted “When a coincident high drywell pressure signal is present, ADS initiates earlier and at a higher RPV water level.” ADS design change.
10	T02.04.02-01, Row 1, Columns 1 and 3	Deleted reference to system description. System configuration is shown in Figure 2.4.2-1.
11	T02.04.02-01, Row 2, Columns 1 and 2	Rewritten for clarity.
12	T02.04.02-01, Row 3 and Row 4	Rewritten for clarity. Flow tests of GDCS injection and equalizing lines required by ITACC 2 bound valve loss coefficients and any other losses in GDCS flow paths.
13	T02.04.02-01, Row 5 and 6	Deleted ITACC. Deluge function of GDCS is nonsafety-related.
14	T02.04.02-01, Row 12	Rewritten for clarity.

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### DCD Tier 1, Section 2.4

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or fig)	<b>Description of Change</b>
15	T02.04.02-01, Added Rows 13 through 19	Additional details provided, in response to RAI's 6.3-18 and 6.3-23.
16	F02.04.02-01	Updated figure in response to RAI 6.3-36.



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### DCD Tier 1, Section 2.5

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.5.1	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
2	S2.5.2	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
3	S2.5.3	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
4	S2.5.4	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
5	S2.5.5, 3 <sup>rd</sup> para	Changed seismic class from ...I... to ...II
6	S2.5.5, 6th para	Changed seismic class from ...I... to ...II
7	Table 2.5.5-1	Corrected title of fuel handling machine.
8	Table 2.5.5-1	Deleted bullet “b”, not applicable to fuel handling machine.

### Tier 1 Changes From Revision 02 to Revision 03

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
		There is no RPV, hence no control blades, only applicable in the RB.
9	S2.5.6, 3 <sup>rd</sup> para.	Changed paragraph to note that fuel may be moved directly to the reactor building buffer pool fuel storage racks directly via the IFTS instead of temporarily placing the fuel in the fuel building fuel storage racks.
10	S2.5.6, 3 <sup>rd</sup> para.	Changed paragraph to note that the new fuel racks will most likely not have neutron poison but instead maintain the fuel in a sub-critical array by maintaining the fuel bundle to fuel bundle spacing.  Deleted the statement “are of stainless steel construction with” because other acceptable materials exist.
11	S2.5.6, 7th para.	Added statement to clarify the applicable time when boiling is and is not allowed.
12	T2.5.6-1	Title change to denote that the table applies to both spent and new fuel storage.
13	T2.5.6-1, Item 2	Clarified that the temperature was an exit temperature.
14	T2.5.6-1, new Item 3	Added new ITAAC to address rack stresses during accident conditions.
15	S2.5.7	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
16	Table 2.5.10-1. Items 1 and 2	In the Acceptance Criteria, changed “permits” to “passed.”
17	Table 2.5.10-1, Item 3	Clarified Columns 2 and 3 per utility comments.

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### DCD Tier 1, Section 2.6

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.06.1, 3rd para., 2nd sent	Replaced “Class 1E” with “safety-related”
2	S2.06.1, 5th para., 1st sent.	Added the text “... , purified through the demineralizers, ...” based on Tier 2 Section 5.4.8.2
3	S2.06.1, 9th para., 2nd sent.	Replaced “and” with “or”
4	T2.6.1-1, Row 6	Replaced “Class 1E” with “safety-related”
5	S2.6.2, 2 <sup>nd</sup> para.	Added “or II”, as a result of a design change.
6	S2.6.2, 3 <sup>rd</sup> para.	Replaced “redundant” with “physically separated”, as a result of a design change.
7	S2.6.2, 6 <sup>th</sup> para.	Added two sentences describing how water treatment units can be bypassed.
8	S2.6.2, 7 <sup>th</sup> para.	Replaced “10 years” with “20 years”, as a result of a design change.
9	S2.6.2, 9 <sup>th</sup> para.	Changed “air” to “pneumatic”.
10	S2.6.2, 9 <sup>th</sup> para.	Added “within 30 seconds”
11	S2.6.2, 9 <sup>th</sup> para.	Revised last sentence to clarify failure mode of containment isolation valves, as a result of a design change.
12	S2.6.2, 10 <sup>th</sup> para.	Added an exception stating that valves needed to perform post-accident recovery functions are not isolated.
13	S2.6.2, 11 <sup>th</sup> para.	Revised paragraph to describe parallel, redundant, fail as-is, isolation valves for the LPCI interface with the RWCU/SDC System, as a result of a design change.
14	S2.6.2, 16 <sup>th</sup> para.	Added an exception stating that valves needed to perform post-accident recovery functions are not isolated.
15	T2.6.2-1, item 1	Added Figure 2.6.2-1 to the Design Commitment for configuration.

### **Tier 1 Changes From Revision 02 to Revision 03**

16	T2.6.2-1, item 3	Revised ITAAC item to include the Fire Protection System as a water source. Added flow capacity to the design commitment. Added flow requirements that must be satisfied to the acceptance criteria.
17	T2.6.2-1, item 7	Revised testing criteria so the valve is tested against normal operating pressure instead of design pressure. Also, revised the acceptance criteria to reference the valve closure numbers appearing in Tier 2 Tables 6.2-33, 34, and 35.
18	T2.6.2-1, item 10	Added “with adequate ranges” to the design commitment, and specified these ranges in the acceptance criteria. Replaced the skimmer surge tank level instruments with the Spent Fuel Pool level instruments.
19	F2.6.2-1	Revised figure to add parallel valves in several locations, as a result of RAI 6.2-125 and a design change.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.7

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.7.1, 1 <sup>st</sup> para., 1 <sup>st</sup> sent.	Replaced “large ” with “wide”, for consistency with acronym; “WDP”.
2	S2.7.1, 1 <sup>st</sup> para., 2 <sup>nd</sup> sent.	Replaced “between” with “among” for clarity.
3	S2.7.1, 2 <sup>nd</sup> para., last sent.	Replaced “have been” with “are”, for verb tense consistency.
4	S2.7.1, last para., 1 <sup>st</sup> sent.	Deleted “, which will be undertaken” for clarity and verb tense consistency.
5	T2.7.1-1, Column 1	Replaced “between” with “among” for clarity in Item 1 and 2.
6	T2.7.1-1, Column 2, Item 1	Replaced “will be” with “are” for consistency of verb tense in Item 1 and 2.
7	T2.7.1-1, Column 2, Item 3	Replaced “will be” with “is” for consistency of verb tense.
8	T2.7.1-1, Column 2, Item 2	Added “and nonsafety-related” for consistency with column 1.
9	T2.7.1-1, Column 2, Item 3	Added “components of” for clarity
10	T2.7.1-1, Column 3, Item 1	Replaced “separation” with “independence” for consistency with column 1.
11	T2.7.1-1, Column 3, Item 2	Replaced “separation” with “independence” for consistency with column 1.
12	T2.7.1-1, Column 3, Item 2	Replaced “non-Class1E” with “nonsafety-related” for consistency with column 1.
13	S2.7.2, 1 <sup>st</sup> para., 1 <sup>st</sup> sent.	Replaced “the radwaste control room” was replaced by “a control room” as level of detail not being appropriate for tier 1 and in response to a utility comment.
14	S2.7.2, 1 <sup>st</sup> para., 2 <sup>nd</sup> sent.	Additional information provided; added “parameters and”, in response to a utility comment.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.7

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
15	S2.7.2, 2 <sup>nd</sup> para.	Deleted “Programmable controllers are used in this application. They are not safety related” as not being appropriate level of detail and in response to a utility comment
16	S2.7.3, 1 <sup>st</sup> para., 2 <sup>nd</sup> sent.	Rewritten for clarity/additional information provided in response to a utility comment and consistent with Tier 2 Subsection 7.2.1.6.
17	S2.7.3, 1 <sup>st</sup> para., last sent.	Replaced “between” with “among” for clarity.
16	S2.7.3, last para., 1 <sup>st</sup> sent.	Deleted “, which will be undertaken” for clarity and verb tense consistency.
17	T2.7.3-1, Column 1, Item 2.	Replaced “between” with “among” for clarity.
18	T2.7.3-1, Column 2.	Replaced “will be” with “are”, thrice.
19	T2.7.3-1, Column 3, Item 2	Replaced “physical separation or electrical isolation” with “physical and electrical independence”, twice, for consistency with column 1.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.8

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.8.1, Bulleted List	Replaced all bulleted requirements with new requirements per RAI 4.2-13
2	S2.8.2, Bulleted List	Replaced all bulleted requirements with new requirements per RAI 4.2-13

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.9

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	NA	None



## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.10

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	02.10.01 5 <sup>th</sup> para	Deleted. Redundant the deleted one sentence paragraph and requirement is better described by the next paragraph that followed the deleted paragraph.
2	02.10.01 8 <sup>th</sup> para, 1 <sup>st</sup> sent	Changed “, which will be undertaken for” with “for” for clarity.
3	T02.10.01-01 R1 Column 1	Added “functional” and “of” for clarity
4	T02.10.01-01 R1 Column 3	Changed “functional arrangements as described” with “basic functional description” for clarity
5	T02.10.01-01 Item 3 Columns 1, 3	Added “unit-specific” before “key,” because the much of any liquid waste system will be unit/site specific.
6	F02.10.01-01	Added “*Similar to or similar” for clarity
7	02.10.03 2 <sup>nd</sup> para.	Changed “and” to “, and thereby,” for clarity and to make consistent with DCD Tier 2 Chapter 11 Rev 3.
8	02.10.03 2 <sup>nd</sup> para.	Changed “evacuation” to “air removal” for naming accuracy.
9	02.10.03 5 <sup>th</sup> para.	Changed “evacuation” to “air removal” for naming accuracy.
10	02.10.03 6 <sup>th</sup> para.	Removed “Critical and essential information is available in the main control room.” Because it is redundant with the rest of the paragraph and to align with verbiage in Tier 2 Chapter 11 Rev 3.
11	02.10.03 7 <sup>th</sup> para, 1 <sup>st</sup> sent	Changed “, which will be undertaken for” with “for” for clarity.
12	T2.10.3-1, Item 2	Changed “hydrostatic” to “leak”
13	T2.10.3-1, Item 3, DC	Added “and mechanical joints.”
14	T2.10.3-1, Item 3	Replaced ITA and AC to address the use of “soap bubble” tests, and clarified the AC.
15	T2.10.3-1, Item 4, AC	Replaced “results demonstrate” with “reports document”.
16	T2.10.3-1, Item 4, ITA	Deleted “a MCR alarm will activate and” because it is covered in 4.a.

## **Tier 1 Changes From Revision 02 to Revision 03**

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	<b>Whole Document</b>	Globally replaced “turbine-generator” with “Turbine Generator” to be consistent with Chapter 10, Tier 2, as well as other chapters and sections.
2	S2.11.1, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the word “Generator” after the word “Turbine” and replaced the word “valves” with the word “system.” These changes were made to correct equipment or system description.
3	S2.11.1, “Design Description”, 2 <sup>nd</sup> paragraph, 3 <sup>rd</sup> bullet	Inserted the word “Isolation” after “Auxiliary” and replaced the acronym “(SA)” with “(SAIVs)” to prevent the duplicate use of the acronym “SA” which is used elsewhere to mean “severe accident.” This acronym change was used throughout this section. Added the words “on branch lines between the Main Steam Isolation Valves (MSIVs) and main turbine stop valves” after the acronym. Deleted the words “Main Steam Isolation Valve” before “MSIV” and removed the parentheses from around the acronym. These changes were made to clarify meaning or intent.
4	S2.11.1, “Design Description”, 2 <sup>nd</sup> paragraph, new 5 <sup>th</sup> bullet	Added a new fifth bullet: “Opens the drain valve(s) on an MSIV isolation signal that are required to change position to provide the MSIV leakage path to the main condenser. The required drain valve(s) are equipped with reliable power sources or designed to fail to the open position on loss of electrical power to the valve actuating solenoid or on loss of pneumatic pressure.” This change was made in response to RAI 10.3-10 and RAI 15.4-23.
5	S2.11.1, “Design Description”, 3 <sup>rd</sup> paragraph, 2 <sup>nd</sup> sentence	Inserted the words “turbine bypass system and” before the word “power” to clarify the DCD text and to incorporate design details.
6	S2.11.1, “Design Description”, 4 <sup>th</sup> paragraph, 2 <sup>nd</sup> sentence	Deleted the words “and classified as nonsafety-related” at the end of the sentence to eliminate a redundant statement of safety classification.
7	S2.11.1, “Design Description”, 5 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Changed “Turbine MS” to the acronym “TMSS.” Added the word “Isolation” before the word “Valve” to correct equipment or system description. The change from “Turbine MS” to “TMSS” is used throughout section 2.11.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
8	S2.11.1, “Design Description”, 5 <sup>th</sup> paragraph, new 2 <sup>nd</sup> sentence	Added the following new text: “The MSIV fission product leakage path to the main condenser is analyzed to demonstrate structural integrity under Safe Shutdown Earthquake (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.” This change was made in response to RAI 10.3-10 and RAI 15.4-23.
9	S2.11.1, “Design Description”, 6 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the word “Reactor Building” before the word “steam” to correct equipment or system description.
10	S2.11.1, “ITAAC”, 1 <sup>st</sup> sentence	Replaced the words “which will be undertaken for the” with the word “for” to clarify the text. This change was applied throughout section 2.11.
11	T2.11-1, 2 <sup>nd</sup> row	Added the words “Section III” after the word “Code” in two places to clarify the requirement.
12	T2.11-1, 2 <sup>nd</sup> row, 3 <sup>rd</sup> column	Added the words “satisfy” and “applicable” to clarify the requirement.
13	T2.11.1-1, 1 <sup>st</sup> column, 3 <sup>rd</sup> row	Changed the acronym “SA” to “SAIV(s)” and deleted the word “valve(s)” to prevent the duplicate use of the acronym “SA” which is used elsewhere to mean “severe accident.” This acronym change was used throughout this table. Added the words “and required MSIV fission product leakage path TMSS drain valve(s) open(s)” at the end of the sentence. These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
14	T2.11.1-1, 2 <sup>nd</sup> column, 3 <sup>rd</sup> row	Replaced the beginning of the sentence to “Tests will be performed on the SAIV(s) and required MSIV fission product leakage path TMSS drain valve(s) using” in response to RAI 10.3-10 and RAI 15.4-23. Deleted the words “tests will be performed on the SA valves” at the end of the sentence. These changes were made to clarify the DCD text.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
15	T2.11.1-1, 3 <sup>rd</sup> column, 3 <sup>rd</sup> row	Inserted the words “and required MSIV fission product leakage path TMSS drain valve(s) open(s)” before the word “following.” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
16	T2.11.1-1, 1 <sup>st</sup> column, 4 <sup>th</sup> row, 1 <sup>st</sup> sentence	Added the words “and required MSIV fission product leakage path TMSS drain valve(s) open(s).” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
17	T2.11.1-1, 1 <sup>st</sup> column, 4 <sup>th</sup> row, 2 <sup>nd</sup> sentence	Added the words “and required MSIV fission product leakage path TMSS drain valve(s)” after the word “close(s).” These changes were made in response to RAI 10.3-10 and RAI 15.4-23. Deleted the last sentence to remove redundant information/text.
18	T2.11.1-1, 2 <sup>nd</sup> column, 4 <sup>th</sup> row	Replaced the word “Test” at the beginning of the sentence with “A functional test.” Deleted the word “valve(s).” Added the phrase “and required MSIV fission product leakage path TMSS drain valve(s)” These changes were made to clarify the DCD text and in response to RAI 10.3-10 and RAI 15.4-23.
19	T2.11.1-1, 3 <sup>rd</sup> column, 4 <sup>th</sup> row	Added the phrase “and required MSIV fission product leakage path TMSS drain valve(s) open(s)” after the word “close(s).” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
20	T2.11.1-1, 1 <sup>st</sup> column, 5 <sup>th</sup> row	Deleted the word “valve(s)” after the acronym “SAIV(s).” Added the phrase “and the required MSIV fission product leakage path” before the words “is analyzed.” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
21	T2.11.1-1, 2 <sup>nd</sup> column, 5 <sup>th</sup> row	Deleted the word “and” from after piping and the word “valve(s)” after the acronym “SAIV(s).” Added the phrase “and required MSIV fission product leakage path” before the word “will.” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.
22	T2.11.1-1, 3 <sup>rd</sup> column, 5 <sup>th</sup> row	Replaced the acronym “MS” with “TMSS.” Deleted the words “and” from after piping and the word “valve(s)” after the acronym “SAIV(s).” Added the phrase “and required MSIV fission product leakage path” before the word “can.” These changes were made in response to RAI 10.3-10 and RAI 15.4-23.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
23	T2.11.1-1, 3 <sup>rd</sup> column, new 6 <sup>th</sup> row	Added a new sixth row to this table in response to RAI 10.3-10 and RAI 15.4-23.
24	S2.11.2, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Changed the word “hotwell” to “hotwell(s)” to allow flexibility in site-specific details.
25	S2.11.2, “Design Description”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	Changed the word “hotwell” to “hotwell(s)” to allow flexibility in site-specific details and added the words “auxiliary condenser/coolers,” after the word “CPS” to incorporate design details. Added the words “into the” before the word “feedwater” to clarify the DCD text.
26	S2.11.2, “Design Description”, 1 <sup>st</sup> paragraph, new 3 <sup>rd</sup> sentence	Ended the 2 <sup>nd</sup> sentence after “feedwater tank” and created a new third sentence starting with “The feedwater pumps. Inserted the words “take a suction from the feedwater tank.” Deleted the words “then is.” Changed “pumped” to “pump” and added the word “feedwater” before “through.” Added the word “feedwater” before the word “heaters.” These changes were made to clarify the DCD text.
27	S2.11.2, “Design Description”, 1 <sup>st</sup> paragraph, 5 <sup>th</sup> sentence	Replaced “shall be” with “is”, “for” with “during anticipated” and “transient situations” with “operational occurrences.” These changes were made to correspond with wording in other DCD chapters and sections.
28	S2.11.2, “Design Description”, 1 <sup>st</sup> paragraph, 6 <sup>th</sup> sentence	Replaced the words “with a dome pressure of” with the word “at” to clarify the actual requirement. Replaced the value “7.43” with “7.34” to correct a typographical error. Replaced the words “shall be” with “is” to be consistent with other DCD chapters and sections.
29	S2.11.2, “Design Description”, 3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the words “Reactor Building” before the word “steam” to correct equipment or system description.
30	T2.11.2-1, 3 <sup>rd</sup> column, list item #1	Inserted the words “the basic configuration as described in” before the word “Subsection” to clarify the text.
31	T2.11.2-1, list items #2 and #3	Replaced items #2 and #3 with new ITAACs to more accurately reflect the actual design criteria and assumptions used in design basis documents.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
32	S2.11.3, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Added the words “as required to maintain reactor feedwater purity” after the word “condensate.” Replaced the word “insoluble” with “suspended.” Added the phrase “including corrosion products” after the word “solids.” Deleted the word “demineralizer.” Replaced the word “soluble” with the word “dissolved.” These changes were made to clarify the DCD text.
33	S2.11.3, “Design Description”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	Replaced the words “followed by” with the word “and” and “mixed” bed” with “ion exchange.” These changes were made to clarify the DCD text.
34	S2.11.3, “Design Description”, 2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the word “or” before “ensure” and added the words “or support” after “ensure.” These changes were made to correspond with other DCD chapters and sections.
35	S2.11.3, “Design Description”, 3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the word “radiation” from before the word “controlled” to clarify the DCD text.
36	S2.11.3, “Design Description”, 5 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Changed the word “display” to “indication(s)” and added “or on local panels” after “main control room” to allow flexibility in site-specific details.
37	T2.11.3-1, 2 <sup>nd</sup> column, 2 <sup>nd</sup> row	Changed the word “display” to “indication(s)” to allow flexibility in site-specific details.
38	T2.11.3-1, 3 <sup>rd</sup> column, 2 <sup>nd</sup> row	Changed the word “displays” to “indication(s)” and added “or on local panels” after “main control room” and replaced the word “defined” with “described” to allow flexibility in site-specific details.
39	S2.11.4, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Replaced the word “reference” with the word “standard” to correspond with other DCD chapters and sections.
40	S2.11.4, 1 <sup>st</sup> paragraph, 3 <sup>rd</sup> sentence	Added the option for having one or more than one MSR by changing “reheater” to “reheater(s)” and “(MSR)” to “(MSRs)” to allow flexibility in site-specific details.
41	S2.11.4, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	Replaced the words “by the COL applicant” with “on a unit-specific basis” to correspond with other DCD chapters and sections, i.e. for consistency.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
42	S2.11.4, 1 <sup>st</sup> paragraph, 4 <sup>th</sup> sentence	Added the words “condensate and” before the word “feedwater” to clarify the DCD text.
43	S2.11.4, 2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the words “for transients and short term loading conditions” to clarify the text and to be consistent with other DCD chapters and sections.
44	S2.11.4, 1 <sup>st</sup> paragraph, new 7 <sup>th</sup> sentence	Added the following new sentence “The system’s physical layout provides protection to essential systems and components, as required, from the effects of high and moderate energy Turbine Generator system piping failures or failure of the connection(s) from the low pressure turbine exhaust hoods to the condenser. Essential systems and components are as defined in BTP SPLB 3-1.” This change was made in response to RAI 10.4-11.
45	S2.11.4, new 2 <sup>nd</sup> paragraph	Added a new paragraph entitled “Turbine Disk Integrity” to correspond with other DCD chapters and sections and in response to numerous section 10.2 RAIs.
46	S2.11.4, subsection “Turbine Overspeed Protection System”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Added the word “Generator” before the word “control” and “rotor” before “failure.” Replaced the phrase “high-energy” with “turbine.” These changes were made to correct equipment or system description and to correct the description of relevant turbine missiles.
47	S2.11.4, subsection “Turbine Overspeed Protection System”, 2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> bullet	Deleted the acronym “(CIVs)” to correct equipment or system description.
48	S2.11.4, subsection “Turbine Overspeed Protection System”, 2 <sup>nd</sup> paragraph, 3 <sup>rd</sup> bullet	Replaced the word “Primary” with the word “Normal” and “backup” with “Primary Overspeed.” Added “/Emergency overspeed control” after “control.” These changes were made to correct equipment or system description.
49	S2.11.4, subsection “Turbine Overspeed Protection System”, 2 <sup>nd</sup> paragraph, 5 <sup>th</sup> bullet	Added the word “signals” after the word “control” and “primary” before the word “overspeed.” Replaced the word “backup” with “emergency.” These changes were made to correct equipment or system description.



## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
50	S2.11.4, subsection “Turbine Overspeed Protection System”, 3 <sup>rd</sup> paragraph, 2 <sup>nd</sup> sentence	Replaced the words “for any high energy TG system generated” with the words “of turbine” and deleted the word “from” before “damaging.” These changes were made to correct the description of relevant turbine missiles.
51	S2.11.4, subsection “Turbine Overspeed Protection System”, new 4 <sup>th</sup> paragraph	Added a new fourth paragraph as a result of design commitments for turbine missile probability and RAI’s 3.5-12 and 3.5-13.
52	T2.11.4-1, 3 <sup>rd</sup> column, 1.(a)	Deleted the acronym “(CIVs).” Replaced the word “Primary” with “Normal” and “Backup speed” with “Primary Overspeed.” Added the words “Emergency Overspeed Control” after the word “control” and “signals/Primary” before “overspeed” and replaced “Backup” with “Emergency.” These changes were made to correct equipment or system description.
53	T2.11.4-1, 1 <sup>st</sup> column, 2 <sup>nd</sup> row	Changed “orientated” to “oriented” to correct grammatical or syntax error. Replaced the words “high-energy TG system” with the word “turbine.” These changes were made to correct the description of relevant turbine missiles.
54	T2.11.4-1, 3 <sup>rd</sup> column, 2 <sup>nd</sup> row and New 2 <sup>nd</sup> sentence	Deleted the words “and Control” from before the word “Building.” Added a new second sentence: “The Control Building is outside the low-trajectory turbine missile strike zone.” These changes were made to incorporate design details and to clarify the description of the ESBWR plant layout.
55	T2.11.4-1, new 3 <sup>rd</sup> row	New list item was added to comply with proposed regulatory requirements (DG-1145).
56	T2.11.4-1, new 4 <sup>th</sup> row	New list items were added to comply with RAI responses to RAIs 3.5-12 and 3.5-13 and proposed regulatory requirements (DG-1145).
57	T2.11.4-1, new 5 <sup>th</sup> row	New list item was added to comply with RAI responses to RAIs 3.5-12 and 3.5-13.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
58	S2.11.5, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the following words “prevents the escape of radioactive steam from the turbine shaft/casing penetrations and valve stems and prevents air in leakage through sub-atmospheric turbine glands.” This change was made to delete redundant information/text.
59	S2.11.5, “Design Description”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	Deleted the following words “Specifically, the TGSS...” This change was made to delete redundant information/text.
60	S2.11.5, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> list item	Replaced the word “Prevents” with the word “Limits” and “prevents” with “minimizes” to clarify the DCD text and to correspond with other DCD chapters and sections.
61	S2.11.5, “Design Description”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> list item	Replaced the word “system” with the word “stack” to correct equipment or system description.
62	S2.11.5, “Design Description”, 1 <sup>st</sup> paragraph, 3 <sup>rd</sup> list item	Replaced the word “enough” with the word “sufficient” and “packing” with the word “gland” to clarify the DCD text and to correspond with other DCD chapters and sections.
63	S2.11.5, “Design Description”, 2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence	Replaced the word “continuous” with “effluent” and deleted the words “monitoring of its effluents” from the end of the sentence to clarify meaning or intent.
64	T2.11.5-1, 3 <sup>rd</sup> row, 1 <sup>st</sup> column	Added the word “Main” before the word “Control” to correct equipment or system description and changed “are” to “is” to correct a grammatical error.
65	T2.11.5-1, 2 <sup>nd</sup> row, 2 <sup>nd</sup> column	Added the word “Main” before the word “Control” to correct equipment or system description.
66	T2.11.5-1, 2 <sup>nd</sup> row, 3 <sup>rd</sup> column	Added the word “Main” before the word “Control” to correct equipment or system description.
67	S2.11.6, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Replaced the word “A” with “The” to correct a grammatical error and the words “can pass” with the word “passes.” Inserted the words “via the Turbine Main Steam System (TMSS)” before the word “under” to clarify the DCD text. Replaced the words “pressure regulator” with the words “Steam Bypass and Pressure Control (SB&PC) System” to correct equipment or system description.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
68	S2.11.6, “Design Description”, 1 <sup>st</sup> paragraph, 2 <sup>nd</sup> sentence	Replaced the words “reactor steaming rate exceeds the load permitted to pass to” with the words “amount of steam generated by the reactor cannot be entirely used by.” Deleted the word “generator” after the word “turbine.” These changes were made to clarify the DCD text.
69	S2.11.6, “Design Description”, 1 <sup>st</sup> paragraph, 3 <sup>rd</sup> sentence	Replaced the word “reference” with the word “standard” and the words “shed 100% of the turbine generator rated load” with “accommodate a full load rejection” to correspond with the wording in other DCD chapters and sections. Replaced the words “reactor trip or” with the word “the” before operation. These changes were made to clarify the DCD text and provide the actual system design requirement.
70	S2.11.6, “Design Description”, 1 <sup>st</sup> paragraph, 4 <sup>th</sup> sentence	Replaced the words “pressure regulation” with the acronym “SB&PC” to correct equipment or system description.
71	S2.11.6, “Design Description”, 2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the word “or” before “ensure.” Inserted the words “or support” before the word “any” and “and” before the word “is.” Deleted the phrase “and has no failure within the TBS that could prevent safe shutdown” from the end of the sentence. These changes were made to correspond with other DCD chapters and sections and to remove unnecessary detail on safety system classification. While the statement “no failure within the TBS that could prevent safe shutdown” is true, it is implied in the safety classification (nonsafety-related).
72	S2.11.6, “Design Description”, 2 <sup>nd</sup> paragraph, 2 <sup>nd</sup> sentence	Inserted the acronym “AOOs” before the word “which” and replaced the word “per” with the words “are defined in” to clarify the DCD text. Deleted the words “are defined” before the word “as” to clarify meaning or intent.
73	S2.11.6, “Design Description”, 3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence	Replaced the word “opened” with “controlled.” Deleted the article “a” before “signal” and replaced “signal” with “signal(s)” to clarify the DCD text. Changed the title “Steam Bypass and Pressure Control” to the acronym “SB&PC” to correct equipment or system description.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
74	S2.11.6, “Design Description”, 4 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the word “normally” before the word “open” and replaced the words “vacuum in the” with the word “main.” Replaced the words “falls below a” with the words “pressure increases to.” Replaced “valve” with “valve(s).” Deleted the word “system” from before “pressure” and added the words “to their actuator” at the end of the sentence. These changes were made to clarify the DCD text.
75	T2.11.6-1, 1 <sup>st</sup> column, 2 <sup>nd</sup> row	Replaced the word “opened” with the word “controlled” and “signal” with “signal(s).” These changes were made to clarify the DCD text and allow flexibility in site-specific details.
76	T2.11.6-1, 2 <sup>nd</sup> column, 2 <sup>nd</sup> row	Replaced the word “signal” with “signal(s)” to allow flexibility in site-specific details.
77	T2.11.6-1, 3 <sup>rd</sup> column, 2 <sup>nd</sup> row	Replaced the word “open” with the word “operate” and the word “signal” with “signal(s).” These changes were made to clarify the DCD text.
78	T2.11.6-1, 5 <sup>th</sup> Item	Clarified all three columns.
79	S2.11.7, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the phrase “provides a hold-up volume for N <sup>16</sup> decay” before the word “provides” to correspond with other DCD chapters and sections.
80	S2.11.7, “Design Description”, 2 <sup>nd</sup> paragraph, 1 <sup>st</sup> sentence	Deleted the word “the” before the word “main” to correct a grammatical or syntax error.
81	S2.11.7, “Design Description”, 3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the word “condenser” before the word “supports.” Deleted the words “for the MC” before the verb “are” to clarify the DCD text. Inserted the words “maintain condenser integrity following” after “to.” Deleted the word “withstand” before the words “a safe.” These changes were made to comply with GE Proprietary Report NEDC-31858P, “BWROG Report for Increasing MSIV Leakage and Elimination of Leakage Control Systems,” rev. 2 and the associated Licensing Topical Report, NEDE-33279P, “ESBWR Containment Fission Product Removal,” rev. 0.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
82	S2.11.7, “Design Description”, 6 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the word “normally” after the acronym “MC” and the word “air” before the word “leakage.” These changes were made to clarify the DCD text.
83	S2.11.7, “Design Description”, 6 <sup>th</sup> paragraph, 2 <sup>nd</sup> sentence	Replaced the words “from the tubes to” with the word “into” and inserted the word “shell” after the word “condenser.” Replaced the words “beneath the tube bundles” with the words “at select locations in the hotwell.” These changes were made to clarify the DCD text.
84	S2.11.7, “Design Description”, 6 <sup>th</sup> paragraph, 3 <sup>rd</sup> sentence	Deleted the article “a” before the word “conductivity” to correct a grammatical or syntax error. Changed the word “monitor” to “monitor(s)” to allow flexibility in site-specific details. Replaced the words “is located at the discharge of” with the word “in.” Inserted the word “systems” after the word “condensate.” Changed “provided” to “provide.” Inserted the word “alarms” before the word “in” and added the acronym “(MCR)” after the word “Room” to clarify the DCD text.
85	S2.11.7, “Design Description”, 7 <sup>th</sup> paragraph, 1 <sup>st</sup> sentence	Replaced the words “The loss of” with the words “An increase in” and the word “vacuum” with the words “pressure above preset level(s).” Inserted the words “MCR alarm, a” before the word “turbine” and added the article “a” before “reactor.” These changes were made to clarify the DCD text.
86	T2.11.7-1, 1 <sup>st</sup> column, 1 <sup>st</sup> row	Inserted the word “condenser” before the word “supports.” Deleted the words “for the MC” before the word “are.” Replaced the word “withstand” with the words “maintain condenser integrity following.” These changes were made to clarify the DCD text and to comply with GE Proprietary Report NEDC-31858P, “BWROG Report for Increasing MSIV Leakage and Elimination of Leakage Control Systems,” rev. 2 and the associated Licensing Topical Report, NEDE-33279P, “ESBWR Containment Fission Product Removal,” rev. 0.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
87	T2.11.7-1, 2 <sup>nd</sup> column, 1 <sup>st</sup> row	Replaced the word “withstand” with the words “maintain condenser integrity following” this change were made to comply with GE Proprietary Report NEDC-31858P, “BWROG Report for Increasing MSIV Leakage and Elimination of Leakage Control Systems,” rev. 2 and the associated Licensing Topical Report, NEDE-33279P, “ESBWR Containment Fission Product Removal,” rev. 0.
88	T2.11.7-1, 3 <sup>rd</sup> column, 1 <sup>st</sup> row	Replaced the word “withstand” with the words “maintain condenser integrity following” this change were made to comply with GE Proprietary Report NEDC-31858P, “BWROG Report for Increasing MSIV Leakage and Elimination of Leakage Control Systems,” rev. 2 and the associated Licensing Topical Report, NEDE-33279P, “ESBWR Containment Fission Product Removal,” rev. 0.
89	T2.11.7-1, 1 <sup>st</sup> column, 2 <sup>nd</sup> row	Replaced the words “The loss of” with the words “An increase in” and the word “vacuum” with the words “pressure above preset level(s).” Inserted the words “MCR alarm” after the words “causes a.” These changes were made to clarify the DCD text.
90	T2.11.7-1, 2 <sup>nd</sup> column, 2 <sup>nd</sup> row	Inserted the words “main condenser” before “pressure.” Replaced the words “located on the main condenser” with “and associated logic” to clarify the DCD text. Inserted the words “with a simulated increase in main condenser pressure” before the word “for.” Inserted the word “function” after the word “pressure.” These changes were made to clarify the meaning and intent. Deleted the acronym “RPS” to allow flexibility in site-specific details.
91	T2.11.7-1, 3 <sup>rd</sup> column, 2 <sup>nd</sup> row	Changed the verb “causes” to “cause.” Inserted the words “MCR alarm” before the word “turbine.” Replaced the words “loss of” with the words “a simulated increase in” and the words “vacuum on HIGH pressure” with the words “pressure above preset level(s).” These changes were made to clarify the DCD text. Deleted the acronym “RPS” to allow flexibility in site-specific details.
92	T2.11.7-1, 3 <sup>rd</sup> row	This row was deleted in its entirety because the alarm function was incorporated into the ITAAC in row 2.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.11

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
93	S2.11.8, “Design Description”, 1 <sup>st</sup> paragraph, 1 <sup>st</sup> sentence	Inserted the acronym “(NPHS)” after the word “Sink.” This change was made to correct equipment or system description.
94	S2.11.8, “Design Description”, 3 <sup>rd</sup> paragraph, 1 <sup>st</sup> sentence and 2 <sup>nd</sup> sentence	Deleted the words “CIRC automatically isolates in the event of gross system leakage. The” and joined the first and second sentences. Replaced the words “high-high” with the word “water.” These changes were made to clarify the DCD text.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.12

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.12.1, Design Description	Deleted 1 <sup>st</sup> paragraph due to superfluous information, no effect on safety. Second paragraph reworded to include ASME code and seismic category
2	T2.12.1-1, item 1	ITAAC reworded to verify safety related containment penetration and valves
3	T2.12.1 –1, item 2	Added ITAAC item 2 to verify ASME code and seismic category for containment penetration
4	S2.12.2, Design Description	This subsection was changed to delete information not relative to TIER 1 requirements.
5	S2.12.3, Design Description	This subsection was changed to delete information not relative to TIER 1 requirements.
6	S2.12.3, I&C section	This section was deleted because information not relative to TIER 1 requirements.
7	S2.12.3, ITAAC section	This subsection was changed to delete information not relative to TIER 1 requirements. It was revised to reflect no ITAAC for this system
8	T2.12.3-1	Deleted table - This Subsection was changed to delete information not relative to TIER 1 requirements.
9	F2.12.3-1	Deleted figure – This Subsection was changed to delete information not relative to TIER 1 requirements.
10	S2.12.4, Design Description, I&C section	Rewrote paragraph – This Subsection was changed to delete information not relative to TIER 1 requirements. This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
11	S2.12.4, ITAAC	Revised to reflect no ITAAC for this system. Subsection was changed to delete information not relative to TIER 1 requirements.



### Tier 1 Changes From Revision 02 to Revision 03

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
12	S2.12.5, Design Description	Rewrote paragraphs – This Subsection was changed to delete information not relative to TIER 1 requirements.
13	S2.12.5, I&C, old T2.12.5-1, and Figure T2-12.5-1	Deleted because information not relative to TIER 1 requirements.
14	T2.12.5-1, new	ITAAC items reworded to include ASME code and seismic category. Added ITAAC item 2 due to containment penetration
15	S2.12.6, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
16	S2.12.7, All	This subsection was replaced to read “This system does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the system is nonsafety-related and has no safety design basis” to delete information not relative to TIER 1 requirements.
17	S2.12.8, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
18	S2.12.8, Design Description	This subsection was revised to specify ASME and Seismic class.
19	S2.12.8, I&C section	This section was deleted because information not relative to TIER 1 requirements.
20	T2.12.8-1	Revised to include an ITAAC to verify safety related containment penetration and valves and an ITAAC to verify ASME code and seismic category
21	S2.12.9, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
22	S2.12.9, I&C	This section was deleted because information not relative to TIER 1 requirements.
23	S2.12.9, ITAAC	Revised to reflect no ITAAC for this system - This Subsection was changed to delete information not relative to TIER 1 requirements.
24	T2.12.9-1	This Subsection was deleted because ITAAC not relative to TIER 1 requirements for this system.

### Tier 1 Changes From Revision 02 to Revision 03

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
25	S2.12.10, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
26	S2.12.10, Design Description	This Subsection was revised to include ASME information.
27	S2.12.10, I&C	This section was deleted because information not relative to TIER 1 requirements.
28	T2.12.10-1	Revised ITAAC to delete information not relative to Tier 1 requirements and include ITAAC for safety-related containment penetration and ASME code and seismic category.
29	S2.12.11, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
30	S2.12.12, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
31	S2.12.13	This Subsection was changed to delete information not relative to TIER 1 requirements.
32	S2.12.14, Design Description	This Subsection was changed to delete information not relative to TIER 1 requirements.
33	S2.12.14, I&C	Deleted because information not relative to TIER 1 requirements.
34	S2.12.15	Not within scope of design certification
35	S2.12.16	Not within scope of design certification
36	S2.12.17	New section created to address the Station Water System

## Tier 1 Changes From Revision 02 to Revision 03

DCD Tier 1, Section 2.13		
Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1	S2.13.1, “Design Description,” 1 <sup>ST</sup> paragraph, 3 <sup>RD</sup> sentence	Deleted “through the main transformers” as clarification to reflect current design, consistent with S8.2.1.2.
2	S2.13.1, “Design Description,” 2 <sup>ND</sup> paragraph, 6 <sup>TH</sup> sentence	Changed “fast transfer” to “automatically transferred” in describing transfer from normal preferred to alternate preferred power. Also, clarified return back to normal preferred power is a manually performed transfer. This is consistent with S8.3.1.1.
3	T2.13.1-1, “Acceptance Criteria,” 2b (UAT)	Incorporated RAI 14.3-105 to state, “The as-built and tested transformer parameters agree with those used in the electric load analysis, within acceptable tolerances.”
4	T2.13.1-1, “Acceptance Criteria,” 2c (UAT)	Incorporated RAI 14.3-106 to state, “The as-built and tested transformer name plate data agrees with the as-tested data, within acceptable tolerances.”
5	T2.13.1-1, “Acceptance Criteria,” 3b (RAT)	Incorporated RAI 14.3-105 to state, “The as-built and tested transformer parameters agree with those used in the electric load analysis, within acceptable tolerances.”
6	T2.13.1-1, “Acceptance Criteria,” 3c (RAT)	Incorporated RAI 14.3-106 to state, “The as-built and tested transformer name plate data agrees with the as-tested data, within acceptable tolerances.”
7	T2.13.1-1, “Acceptance Criteria,” 4a, 4b, and 4c	Made editorial clarification to the acceptance criteria to reflect the design commitment.
8	S2.13.2, “Design Description,” 1 <sup>ST</sup> paragraph, 2 <sup>ND</sup> sentence	Deleted “medium voltage,” as there is no medium voltage inside the primary containment. This clarification is consistent with S8.3.1.4.1.
9	S2.13.2, “Design Description,” 5 <sup>TH</sup> paragraph	Revised paragraph to remain consistent with the design as described in S8.3.1.4.1.

## Tier 1 Changes From Revision 02 to Revision 03

DCD Tier 1, Section 2.13		
Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
10	S2.13.2, “Design Description,” 2 <sup>ND</sup> and 6 <sup>TH</sup> paragraphs	The term safety-related, when used with electrical components/penetration devices, always infers that they will be procured in accordance with Class 1E requirements. This response satisfies RAI 14.3-108.
11	S2.13.2, “Design Description,” T2.13.2-1, item 2	RAI 14.3-109 is answered by T2.13.2-1 for the containment penetration ampacity testing. The manufacturing testing and published data will be part of QA records and not covered in an ITAAC.
12	S2.13.3, “Design Description,” 3 <sup>RD</sup> paragraph	Replaced Motor Control Center (MCC) with Isolation Power Center (IPC), to remain consistent with S8.3.2.1.1.
13	S2.13.3, “Design Description,” 5 <sup>TH</sup> paragraph	Replaced Motor Control Center (MCC) with Isolation Power Center (IPC), to remain consistent with S8.3.2.1.2.
14	S2.13.3, “Design Description,” 6 <sup>TH</sup> paragraph, 12 <sup>TH</sup> sentence	Deleted the sentence, “When high voltage occurs, the unit disconnects the auxiliary voltage transformer, which results in charger shutdown.”
15	T2.13.3-1, “Acceptance Criteria,” 3a	Revised to reflect response to RAI 14.3-110 and RAI 14.3-113 for battery performance test.
16	T2.13.3-1, item 4	Changed “normal steady state loads” to “largest combined steady state loads” to answer RAI 14.3-111, in accordance with RG 1.32 and IEEE 308. Also added “in 24 hours” to address RAI 14.3-114.
17	T2.13.3-1, “Acceptance Criteria,” 5a and 5b	Revised to satisfy RAI 14.3-115. RAI 14.3-116 is satisfied by the current Revision 3 criteria in 5b by adding “equalizing” to establishing the maximum battery operating voltage.
19	T2.13.3-1, 7	Added “vented” to divisional battery room, to answer RAI 14.3-118 and RAI 14.3-119.
20	S2.13.4, “Design Description,” 2 <sup>ND</sup> paragraph	As editorial change, deleted the second paragraph. The paragraph offered no necessary design description for the standby onsite power supplies.

### Tier 1 Changes From Revision 02 to Revision 03

DCD Tier 1, Section 2.13		
Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
21	T2.13.5-1, 1b and 1c	Revised to detail acceptance criteria and delete general statement, and answers RAI 14.3-122.
22	S2.13.7, “Design Description,” 2 <sup>ND</sup> paragraph	Added “may” and changed “COL applicant scope” to “site specific” and deleted the word “dial” as description to the telephone system.
23	S2.13.8, “Design Description,” 4 <sup>TH</sup> paragraph	Deleted the paragraph on security lighting, as safeguards will not be discussed in this Section.
24	T2.13.8-1, Item 1	Replace in response to RAI 14.3-125.
25	T2.13.8-1, “Inspections, Tests, Analyses,” 2	Added “by operating one division at a time” in response to RAI 14.3-127.
26	T2.13.8-1, “Acceptance Criteria,” 2	Added “Inspections confirm” to address RAI 14.3-126.
27	T2.13.8-1, “Acceptance Criteria”	Provided details in place of general statement. This satisfies RAI 14.3-128.
28	T2.13.8-1, item 4	Added new ITAAC item 4 to address seismic requirements for mountings, in response to RAI 14.3-129.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.14

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.14	Changed “COL applicant scope” to “site-specific.”

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.15

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S02.15.1, 11 <sup>th</sup> para.	Deleted the last sentence, because it is redundant.
2	T02.15.1-01, Row 1, Columns 1 and 3	Deleted reference to Figure 2.15.1-1. Figure has been replaced with Subsection 2.15.1-1.
3	T02.15.1-01, Item 2, Column 1	Added: “The reinforced concrete containment vessel (RCCV) and its liners are designed to meet the requirements in Article CC-3000 of ASME Code, Section III, Div. 2. The steel components of the RCCV are designed to meet the requirements in Article NE-3000 of ASME Code, Section III, Div. 1,” in response to RAI 14.3-100
4	T02.15.1-01, Item 2, Column 3	Added: “For ASME Section III, Division 2 construction, stress reports demonstrate compliance to NCA-3350 through NCA-3380, and NCA-3454. For ASME Section III, Division 1 construction, stress reports demonstrate compliance to NCA-3550,” in response to RAI 14.3-96
5	T02.15.1-01, Item 5, Column 2	Added: “The first prototype containment structure will be instrumented to measure strains per ASME Code Section III, Div. 2, CC-6370” in response to RAI 14.3-101
6	T02.15.1-01, Item 5, Column 3	Replaced with “Test results demonstrate compliance to ASME Code Section III, Div. 2, CC-6000, Structural Integrity Test of Concrete Containments.” in response to RAI 14.3-101
7	T02.15.1-01, Item 9, Columns 1, 2, and 3	Capability of position indication is open/close for vacuum breakers.
8	T02.15.1-01, Item 11, Columns 1, 2, and 3	Rewritten for clarity. Control Room indication is only required for position of vacuum breakers.
9	F02.15.01-1	Deleted figure. System description in Subsection 2.15.1 provides sufficient detail for basic configuration of system, and the figure was judged to contain information that was highly subject to change, and thus, not appropriate for a Tier 1.
10	S2.15.4, 2 <sup>nd</sup> & 3 <sup>rd</sup> para.	Editorial clarification
11	S2.15.4, 6th para	Added “ and designed to ASME Code Section III, Class 2, Quality Class B”

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.15

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
12	S2.15.4, 7th para, last sentence	Replaced with “The Dryer/Separator pool and Reactor Well shall be designed to have sufficient water volume to provide makeup water to the IC/PCC pools for the initial 72 hours of a LOCA”
13	T2.15.4-1, Item 1a	Additional details provided for safety class and seismic category.
14	T2.15.4-1, Item 3	Editorial clarification
15	S2.15.5, 3rd –8 <sup>th</sup> para	Replaced paragraphs 3 through 8 with just “ “The containment shall be inerted to $\leq 4\%$ oxygen by volume prior to and during power operation,” because the Containment Inerting System is not safety-related, is subject to change, and the “4%” statement is the only important criterion.
16	T2.15.5-1, Row 1, Columns 1 thru 3,	Replaced ITACC with as-built inspection of safety-related containment penetration. As-built system configuration is not required since system is not needed for any safety function.
17	T2.15.5-1, Row 2, Columns 1 thru 3,	Replaced ITACC with ASME code requirements for containment penetrations and isolation valves.
18	T2.15.5-1, Row 3, Column 1	Rewritten for clarification.
19	F2.15.5-1	Deleted figure. Containment Inerting System is not safety-related, and is highly subject to change, and thus, should not be included within a Tier 1.
20	S2.15.6, DD	This is subsection was changed to “The Drywell Cooling System (DCS) does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the system is nonsafety-related and has no safety design basis.” The deleted information is not relative to TIER 1 requirements.
21	S2.15.6, I&C	Changed to read “Drywell temperature indications are provided in the main control room,” to address the only important parameter, drywell temperature.



## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.15

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
22	T2.15.6-1	ITAAC table was added per RAI 14.3-65
23	F2.15.6-1	Deleted, because the system has no safety function, and this information is not required by DG-1145.
24	S2.15.7, Containment atmospheric and drywell monitoring	New first paragraph added per RAI 6.2-136 response. “Each CMS subsystem is specified to meet environmental and radiological requirements for its location and intended post-accident operations. Design of the sampling ports will allow a representative containment atmosphere sample (drywell and wetwell) to be drawn for analysis.”
25	S2.15.7, Containment atmospheric and drywell monitoring	Second paragraph reworded per RAI 6.2-136 response, and added: “The hydrogen and oxygen monitoring subsystem is capable of measuring hydrogen/oxygen concentration over the required range. In addition, the H2 monitor is specified to be in operation within a timeframe (to be determined) after occurrence of an accident in accordance with USNRC Regulatory Guide requirements.”
26	S2.15.7, 7th bullet	PASS deleted per Design Change
27	S2.15.7, Post Accident Sampling System	PASS deleted per Design Change
28	S2.15.7, Inspections, Tests, Analyses and Acceptance Criteria	Paragraph revised to indicate deletion of T2.15.7-3 for PASS ITAACs per Design Change
29	T2.15.7-1,	Significantly revised to incorporate editorial changes and changes/ additions to ITAAC items per response to RAIs 7.1-14 and -30, and RAIs 6.2-136 and -137.
30	T2.15.7-2	Significantly revised to incorporate editorial changes and changes/ additions to ITAAC items per response to RAIs 7.1-14 and 30
31	T2.15.7-3	PASS deleted per Design Change

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.16.1, new 2nd para	Added the following clarification. “The RB and FB cranes are classified as Seismic Class II and meet the requirements of NUREG-0612 and NUREG-0554.”
2	S2.16.1, 5th para; T2.16.1-1, Items 1 & 4 Inspections, Tests, Analyses and Acceptance Criteria	Changed load test value from 115% to 125%, per NUREG-0554, Section 8.2, in response to RAI 14.3-67, and revised the Acceptance Criteria to be consistent.
3	S2.16.2.1	This is Subsection was changed to delete information not relative to TIER 1 requirements.
4	S2.16.2.1	Changed battery room hydrogen concentration to 2% per RAI 14.3-57.
5	T2.16.2-1	New table per RAI 14.2-52/53.
6	T2.16.2-2	Line items 5 and 6 added to table. This information added to ITAAC per RAI 14.3-55
7	T2.16.2-2, T2.16.2-4, T2.16.2-6, T2.16.2-8	Changed “Class 1E” and “Seismic Category I” to “Safety-related”
8	F2.16.2-2	Changed figure to incorporate carbon in RB Purge Exhaust Filter Unit.
9	2.16.2.2	<p>This Section is re-written to incorporate changes per RAIs impacting Tier 2 Section 6.4 and Subsection 9.4.1 and to revise the design description based on design changes (EBAS replacement).</p> <p>The major changes include revised system functional description, and the elimination of the EBAS and addition of a set of safety-related Emergency Filter Units to provide control room habitability (EBAS replacement).</p>
10	T2.16.2-3	Table 2.16.2-3 was revised to add additional Smoke Exhaust mode isolation dampers (EBAS replacement).
11	Table 2.16.2-4	Table 2.16.2-4 was revised to incorporate changes per RAIs impacting Tier 2 Section 6.4 and Subsection 9.4.1 and to revise the design description based on design changes (EBAS replacement).

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
12	Table 2.16.2-5	Table 2.16.2-5 was revised to incorporate changes (EBAS replacement).
13	Table 2.16.2-3	Table 2.16.2-3 was revised to incorporate changes (EBAS replacement.)
14	Figure 2.16.2-4	Figure 2.16.2-4 was replaced (EBAS replacement).
15	S2.16.2.3	Replaced the complete subsection due to the EBAS replacement.
16	S2.16.2.4	Changed design description in accordance with RAI 14.3-51
17	S2.16.2.4	This is Subsection was changed to delete information not relative to TIER 1 requirements.
18	S2.16.2.5	New section description in accordance with RAI 14.3-45 and 14.3-55
19	S2.16.2.5	This is new subsection was changed to delete information not relative to TIER 1 requirements.
20	T2.16.2-7	Added Table in accordance with RAI 14.3-47
21	T2.16.2-8	Line item 4 added to table. This information added to ITAAC per RAI 14.3-48
22	S2.16.2.6	New section description in accordance with RAI 14.3-50
23	S2.16.2.7	This is a new Subsection for the Electrical Building HVAC System (EBVS), based on Tier 2 Subsection 9.4.7, added per RAIs 14.3-57 and 14.3 -61
24	S2.16.2.8	Section changed to eliminate reference to Radwaste and Electrical building ventilation which both are located in separate sections.
25	S2.16.3, Design Description 3 <sup>rd</sup> and 4 <sup>th</sup> para.	Paragraphs rewritten to incorporate engineering change
26	S2.16.3, Design Description	Sentences and paragraphs rewritten for clarity
27	S2.16.3, I&C section	Editorial changes

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
28	S2.16.3, Interface Requirements	This section deleted in response to editorial comment in RAI 14.3-7 S01.
29	S2.16.3, ITAAC section	Editorial changes
30	T2.16.3-1	This table was updated in response to RAI 9.1-12 S01
31	T2.16.3-2	This table was updated in to incorporate an engineering change
32	T2.16.3-3	ITAAC # 1.b.2 added in response to RAI 14.3-11
33	T2.16.3-3	ITAAC #2 .deleted. Information exceeded requirements for Tier 1.
34	T2.16.3-3	ITAAC # 7.b added in response to RAI 14.3-15
35	T2.16.3-3	ITAAC # 18.b added in response to RAI 14.3-15
36	T2.16.3-3	ITAAC #9 revised to delete diesel generator. Automatic foam is only supplied to rooms with oil tanks.
37	T2.16.3-3	ITAAC #10 revised to change “8 hours” to “96 hours” per engineering change
38	F2.16.3-1	Figure revised due to engineering changes.
39	S2.16.3.1, DD, 2 <sup>nd</sup> and 4 <sup>th</sup> bullets	The 2 <sup>nd</sup> bullet was changed and the 4 <sup>th</sup> bullet was added to incorporate response to RAI 14.3-7 S01
40	S2.16.3.1, ITAAC	Editorial Change
41	S2.16.4, Design Description	Revised 1 <sup>st</sup> paragraph to reflect safety related design basis of the Equipment and Floor Drain System (EFDS) EFDS.[DBH1]
42	S2.16.4, Design Description	Deleted 2 <sup>nd</sup> and 3 <sup>rd</sup> paragraph. Information not relative to TIER 1 requirements.
43	S2.16.4, Instrumentation and Control	Deleted 1 <sup>st</sup> paragraph. Information not relative to TIER 1 requirements.
44	T2.16.4-1	Revised table to delete information not relative to TIER 1 requirements and include ITAAC for safety-related containment penetrations and isolation valves.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
45	T2.16.4-1	Revised table to delete information not relative to TIER 1 requirements and include ITAAC for safety-related containment penetrations and isolation valves.
46	T2.16.4-1	Deleted design commitment for EFDS containment isolation valves to automatically close on an isolation signal. This requirement is provided under 2.2.12 Leak Detection and Isolation System
47	S2.16.5, 1 <sup>st</sup> para., 2 <sup>nd</sup> sent.	Replaced “..and small, spent fuel” with “..and small spent fuel”
48	S2.16.5, 1 <sup>st</sup> para.	Added as last sentence, “The critical dimensions are provided in Table 2.16.5-1.”
49	S2.16.5, 6 <sup>th</sup> para., 3 <sup>rd</sup> bullet	Replaced “Waterproof coating...” With “Waterproofing.....” for consistency with DCD Tier 2 Subsection 3.4.1.2.
50	S2.16.5, 11 <sup>th</sup> para.	Revised “Table 2.16.5-1” to “Table 2.16.5-2” and deleted “....,which will be undertaken...”
51	New T2.16.5-1	Place holder for Critical Dimensions of Reactor Building
52	T2.16.5-2, Title	Renumbered “Table 2.16.5-1” to “Table 2.16.5-2”
53	T2.16.5-2, Item 1, Design Commitment	Revised to refer to new Table 2.16.5-1 to clarify design commitment.
54	T2.16.5-2, Item 1, Acceptance Criteria	Clarified Acceptance Criteria as follows: “A structural analysis report exists which concludes that the as-built building with dimensions in Table 2.16.5-1 is able to withstand the structural design basis loads.”
55	T2.16.5-2, Item 2, Acceptance Criteria	Clarified Acceptance Criteria by adding the following phrase: “Inspection reports exist that show .....
56	T2.16.5-2, Item 3, Design Commitment	Replaced “Protection is provided against external and internal floods.” with “ The RB is protected against external and internal flooding.”

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
57	T2.16.5-2, Item 3, Design Commitment	Revised item 3a under external flooding as follows: “Exterior access openings sealed in exterior walls below flood and groundwater levels” for consistency with DCD Tier 2 Subsection 3.4.1.1
58	T2.16.5-2, Item 3, Design Commitment	Revised item 3b under external flooding as follows: “Water seals at pipe penetrations installed in exterior walls below flood and groundwater levels” for consistency with DCD Tier 2 Subsection 3.4.1.2.
59	T2.16.5-2, Item 3, Design Commitment	Added item 3c under external flooding as follows: “Water stops provided in expansion and construction joints below flood and groundwater levels” for consistency with DCD Tier 2 Subsection 3.4.1.2.
60	T2.16.5-2, Item 3, Design Commitment	Revised item 3a under internal flooding and re-numbered as item 3d as follows: “Flood water in one division is prevented from propagating to other division(s) by divisional walls, sills and watertight doors” for consistency with DCD Tier 2 Subsections 3.4.1.3 and 3.4.1.4.
61	T2.16.5-2, Item 3, Design Commitment	Deleted Item 3b under internal flooding since it is combined under Item 3a to clarify Design Commitment.
62	T2.16.5-2, Item 3, Design Commitment	Deleted Item 3c under internal flooding since Equipment and Floor Drain System is not considered in the flooding evaluation for flooding mitigation per NRC RAI 9.3-31.
63	T2.16.5-2, Item 3, Design Commitment	Changed Item 3d to 3e.
64	T2.16.5-2, Item 3, Acceptance Criteria	Replaced “Flood protection features are provided as described in the Design Commitment” to “Construction records exist showing that flood protection features are installed per specifications” to clarify acceptance criteria.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
65	F2.16.5-2 through 6 and F2.26.5-11	Deleted EBAS and associated changes to seismic classification of Control Building and revised distance between RB/FB and CB per engineering change. In addition clarified that the Tier 1 information is provided in Tables 2.16.5-1, 2.16.6-1, and 2.16.7-1.
66	S2.16.6, 1 <sup>st</sup> para.	Added as last sentence, “The critical dimensions are provided in Table 2.16.6-1.”
67	S2.16.6, 2 <sup>nd</sup> para., 2 <sup>nd</sup> sent.	Revised to read, “The CB structure is a Seismic Category I structure that houses control equipment and operations personnel.” Per engineering change.
68	S2.16.6, 2 <sup>nd</sup> para., 3 <sup>rd</sup> sent.	Deleted per engineering change.
69	S2.16.6, 3 <sup>rd</sup> para., 1 <sup>st</sup> sent.	Replaced “area” with “room”
70	S2.16.6, 4 <sup>th</sup> para., 1 <sup>st</sup> bullet	Replaced “walls,...” with “walls.....”
71	S2.16.6, 8 <sup>th</sup> para., 2 <sup>nd</sup> bullet	Replaced “floods, pipe breaks, and missiles” with “floods and missiles” to match loading combinations per DCD Tier 2, Subsection 3.8.4.3.2.
72	S2.16.6, 9 <sup>th</sup> para.	Revised “Table 2.16.6-1” to “Table 2.16.6-2” and deleted “.....,which will be undertaken....”
73	New T2.16.6-1	Place holder for critical dimensions of Control Building.
74	T2.16.6-2, Title	Renumbered “Table 2.16.6-1” to “Table 2.16.6-2”
75	T2.16.6-2, Item 1, Design Commitment	Revised to refer to new Table 2.16.6-1 to clarify design commitment.
76	T2.16.6-2, Item 1, Acceptance Criteria	Clarified Acceptance Criteria as follows: “A structural analysis report exists which concludes that the as-built building with dimensions in Table 2.16.6-1 is able to withstand the structural design basis loads.”
77	T2.16.6-2, Item 2, Acceptance Criteria	Clarified Acceptance Criteria by adding the following phrase: “Inspection reports exist that show that.....”

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### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
78	T2.16.6-2, Item 3, Acceptance Criteria	Clarified Acceptance Criteria by adding the following phrase: “Inspection reports exist that show that.....”
79	T2.16.6-2, Item 4, Design Commitment	Re-written for consistency with DCD Tier 2 Subsections 3.4.1.1, 3.4.1.2, 3.4.1.3, and 3.4.1.4.
80	T2.16.6-2, Item 4, Inspections, Tests, Analyses	Replaced “Inspections of the as-built walls, penetrations, and doors.....” with “Inspection of the as-built flood control features....”, to match Design Commitment.
81	T2.16.6-2, Item 4, Acceptance Criteria	Replaced “Flood protection features are provided as described in the Design Commitment” to “Construction records exist showing that flood protection features are installed per specifications” to clarify acceptance criteria.
82	S2.16.7, 1 <sup>st</sup> para.	Added as last sentence, “The critical dimensions are provided in Table 2.16.7-1”
83	S2.16.7, 5 <sup>th</sup> para., item 2	Replaced “floods, pipe breaks, and missiles” with “floods and missiles” to match loading combinations per DCD Tier 2, Subsection 3.8.4.3.3.
84	S2.16.7, 6 <sup>th</sup> para.	Revised “Table 2.16.7-1” to “Table 2.16.7-2” and deleted “..,which will be undertaken..”
85	New T2.16.7-1	Place holder for Critical Dimensions of Fuel Building
86	T2.16.7-2, Title	Renumbered “Table 2.16.7-1” to “Table 2.16.7-2”
87	T2.16.7-2, Item 1, Design Commitment	Revised to refer to new Table 2.16.5-1 to clarify design commitment.
88	T2.16.7-2, Item 1, Acceptance Criteria	Clarified Acceptance Criteria as follows: “A structural analysis report exists which concludes that the as-built building with dimensions in Table 2.16.7-1 is able to withstand the structural design basis loads.”
89	T2.16.7-2, Item 2, Acceptance Criteria	Clarified Acceptance Criteria by adding the following phrase: “Inspection reports show that .....”
90	T2.16.7-2, Item 3, Design Commitment	Re-written for consistency with DCD Tier 2 Subsections 3.4.1.1 and 3.4.1.2.



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### DCD Tier 1, Section 2.16

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
91	T2.16.7-2, Item 4, Inspections, Tests, Analyses	Replaced “Inspections of the as-built walls, penetrations, and doors.....” with “Inspection of the as-built flood control features....”, to match Design Commitment.
92	T2.16.7-2, Item 3, Acceptance Criteria	Replaced “Flood protection features are provided as described in the Design Commitment” to “Construction records exist showing that flood protection features are installed per specifications” to clarify acceptance criteria.
93	S2.16.8 and new T2.16.8-1	Description has been expanded and an ITAAC added in response to NRC RAI 14.3-99 and –99 S01.
94	S2.16.10, 3 <sup>rd</sup> para.	Deleted per engineering change.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Section 2.17

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.17.1	Changed “The COL applicant provides requirements for the intake and discharge structure.” to “The intake and discharge structure is site-specific.” to delete a COL item.

### DCD Tier 1, Section 2.18

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S2.18.1	Replaced the subsection with “This equipment does not perform or ensure any safety-related function, is not required to achieve or maintain safe shutdown, and is not subject to high regulatory oversight. Therefore the equipment is nonsafety-related and has no safety design basis.”, because it does not meet any of the Tier 1 criteria in Draft SRPs 14.3-14.3.11, DG-1145 and Tier 2 Subsection 14.3.7.
2	S2.18.2	Changed the COL statement to “on a site-specific basis” to eliminate a COL item.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Chapter 3

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S3.1. 1st para., 2 <sup>nd</sup> sent.	Replaced “the ASME Code” with “their applicable design code
2	S3.1, 2nd para.	Added “Safety-related” for clarification
3	S3.1, 6 <sup>th</sup> para.	Deleted “which will be undertaken”; unnecessary wording
4	T3.1-1, item 1, Column 1	Added “Each safety-related” for clarification
5	T3.1-1, item 1, Column 3	Added “On an individual safety-related system” for clarification
6	T3.1-1, item 2, Column 2,	Deleted “or Leak-Before-Break Report (if applicable)” in response to RAI 3.6-22
7	T3.1-1, item 2, Column 3	Deleted “report and Leak-Before-Break Report (if applicable)” in response to RAI 3.6-22
8	T3.1-1, item 3, Column 1,	Added “On an individual system basis, the” for clarification
9	T3.1-1, item 3, Column 3	Replaced “An” with “On an individual system basis, ” for clarification
10	S03.02, 1 <sup>st</sup> para.	Editorial change for clarity and a large paragraph divided into two paragraphs. Word “essential” eliminated.
11	S03.02, 2 <sup>nd</sup> para.	Editorial changes for clarity
12	S03.02, 9 <sup>th</sup> bullet	Editorial change to fix punctuation
13	S03.02, 11 <sup>th</sup> bullet	Added 11 <sup>th</sup> Bullet for “Cyber Security Program Plan.”
14	S03.02, 4 <sup>th</sup> para.,	Replaced Reg. Guide 1.171 with IEEE-1058.1 to define the managerial processes necessary for Software management.
15	S03.02, 5 <sup>th</sup> para.,	Replaced IEEE-1058 with Reg. Guide 1.173 to define the Software Lifecycle processes for Digital Computer Software used in Safety Systems of Nuclear Power Plants.
16	S03.02, 7 <sup>th</sup> para	Deleted Reg Guide 1.171, Software Unit Testing Guide from Integration Plan.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Chapter 3

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
17	S03.02, 9 <sup>th</sup> para	Deleted two IEEE Codes, 828 and 1042. Added IEEE Std 1219 to better direct Maintenance Activities.
18	S03.02, 10 <sup>th</sup> para.,	Editorial change for clarity.
19	S03.02, 11 <sup>th</sup> para.,	Updated for clarity. Changed conformance with Codes, to addresses Codes, when referring to Software safety plan references..
20	S03.02, 12 <sup>th</sup> para.,	Description of Independent V&V was added. Editorial changes for clarity
21	S03.02, 14 <sup>th</sup> para.,	Cyber Security paragraphs added, in response to RAI 7.1-6
22	T3.2-1 items 1-10	Design Commitments for table items 1 through 10 are formulated based on the Design Descriptions of paragraphs 1 through 13, Tier 1 section 3.2
23	T3.2-1 item 11	Design Commitments Inspections, Tests Analysis and Acceptance Criteria: for item 11 was added in response to RAI 7.1-6, Cyber Security Program Plan.
24	T3.2-1 items 1-10	Inspections, Tests Analysis: A description of which Inspection will be performed is provided.
25	T3.2-1 items 1-10	Acceptance Criteria: for table items 1 through 10 are formulated based on the Design Commitments of Table 3.2-1, items 1 through 10.
26	S3.3, 2 <sup>nd</sup> para., bullets	Revised text to be consistent with Tier 2, S18.1
27	S3.3, 3rd para.	Revised text to be consistent with Tier 2, S18.1
28	S3.3, 4th para.	Revised text to be consistent with Tier 2, S18.1
29	S3.3, 5th para.	Revised text to be consistent with Tier 2, S18.1
30	S3.3, 9th para., numbered list (3)	Added “Allocation of Functions” activity to be consistent with Tier 2
31	T3.3-1, 1d, 2d, 4e, 6f.	Corrected format in table
32	T3.3-1, 7a	Added plant procedures in ITAAC as a result of change justification for deleting Appendices A, B, C containing preliminary EPGs

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### DCD Tier 1, Chapter 3

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
33	T3.3-1, 7e.	Added Technical basis for severe accident management per Tier 2, S18.6.2
34	S3.4, 5th para	Deleted fifth paragraph
35	S3.4, 10th para, 2nd bullet	Updated to reflect information in DCD Tier 2, Subsection 12.3.3.1
36	S3.4, 12th para	Deleted reference to PASS and EBAS, consistent with DCD Tier 2, Subsection 12.3.5
37	T3.4-1, 2nd row	Revised ITAAC regarding airborne radioactivity monitoring
38	S3.7	Added Subsection 3.7 “Post Accident Monitoring Instrumentation” to address the requirements of Regulatory Guide 1.97 Revision 4 and IEEE Standard 497- 2002. This ITAAC was added to address NRC comments. Reference NRC letter dated January 16, 2007 “Summary of November 17, 2006 Category 1 meeting with General Electric, to discuss ESBWR Instrumentation and Control Design and Audit results.”- Item “Post Accident Monitoring Instrumentation.”

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Chapter 4

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	<b>Description of Change</b>
1	S04.01, 2 <sup>nd</sup> para.	Replaced “COL applicant” and “designed” with “site-specific” and “designated”; respectively
2	S04.01, 2 <sup>nd</sup> para.	Replaced “by the COL applicant” with “on a site-specific basis”
3	S4.2, “Design Description,” 1 <sup>ST</sup> paragraph, 2 <sup>ND</sup> sentence	As editorial clarification, added “site” to state “a site specific.”
4	S4.2, “Interface Requirements,” bullets 4, 5, 6, 11	Deleted bullets as they dealt with the onsite power system.
5	S4.2, “Interface Requirements,” bullet 8	Deleted first sentence, as it was not design criteria.
6	S04.03, Interface Requirements, 1 <sup>st</sup> para	Replaced “effect” with “connected to” and added “or any system that could potentially contain radioactive material” to end of sentence
7	S04.03, Interface Requirements, 2 <sup>nd</sup> para	Deleted second paragraph information not relative to TIER 1 requirements.
8	S04.04, Interface Requirements, 2 <sup>nd</sup> para	Deleted information not relative to TIER 1 requirements.
9	S04.05, Interface Requirements, 2 <sup>nd</sup> para	Deleted information not relative to TIER 1 requirements.

## Tier 1 Changes From Revision 02 to Revision 03

### DCD Tier 1, Chapter 5

<b>Item</b>	<b>Location</b> (e.g., subsection with paragraph / sentence / item, table with column/row, or figure)	<b>Description of Change</b>	<b>Validating eDRF Section No.</b>
1	S5.1.1	Added new references section with following items:  5.1-1 American Society of Civil Engineers, Minimum Design Loads for Buildings and Other Structures, ASCE 7-02, 2002.  5.1-2 National Weather Source Publication Hydrometeorology Report No. 52 (HMR-52)  5.1-3 Electric Power Research Institute, "Advanced Light Water Reactor Utility Requirements Document," Revision 6, May 1997.	0000-0064-1498
2	Table 5.1-1, Tornado	Added reference to note (3) to Missile Spectra item.	0000-0064-1498
3	Table 5.1-1, Ambient Design Temperature	Deleted "(Historical Limit)" from 0% exceedance values. Replaced it with clarifying text in note (6) as described later.	0000-0064-1498
4	Table 5.1-1, Soil Properties	Liquefaction potential value modified to apply to both seismic category I and II structures. Added new item, "Angle of Internal Friction $\geq 30$ degrees". (Incorporates response to RAI 3.8-96, Supplement 2.)	0000-0064-1498
5	Table 5.1-1, Hazards in Site Vicinity	Added note to toxic gas value stating "Maximum toxic gas concentrations at the Main Control Room (MCR) and Technical Support Center (TSC) HVAC intakes < toxicity limits".	0000-0064-1498
6	Table 5.1-1	Added new table row for "Maximum Settlement Values for Seismic Category I Buildings". See Attachment 1 for details. (Incorporates response to RAI 3.8-93, Supplement 2).	0000-0064-1498

### Tier 1 Changes From Revision 02 to Revision 03

7	Table 5.1-1, Meteorological Dispersion (X/Q)	Added reference to new note (11) that reads: "(11) If a selected site has a X/Q value that exceeds the ESBWR reference site value, then the radiological consequences associated with the controlling design basis accidents will be analyzed on a site-specific basis, to demonstrate that the dose reference values provided in 10 CFR 50.34(a) and control room operator dose limits provided in General Design Criterion 19 (using site-specific X/Q values) will be met."	0000-0064-1498
8	Table 5.1-1, Long Term Dispersion Estimates	Added reference to new note (12) that reads: "If a selected site has a X/Q value that exceeds the ESBWR reference site value, then the release concentrations will be adjusted proportionate to the change in X/Q. In addition, for a site selected that exceeds the bounding X/Q or D/Q values, the process of how the resulting annual average doses will continue to meet the dose reference values provided in 10 CFR 50 Appendix I (using site-specific X/Q and D/Q values) will be provided on a site-specific basis."	0000-0064-1498
9	Table 5.1-1, Note (2)	Changed "the Utility Requirements Document (URD)" to "Reference 5.1-3".	0000-0064-1498
10	Table 5.1-1, Note (3)	Added following sentence to end of note: "Concrete structures designed to resist Spectrum I missiles of SRP 3.5.1.4, Rev. 2, will also resist missiles postulated in Draft Guide DG-1143." (Clarifications)	0000-0064-1498
11	Table 5.1-1, Note (4)	Changed "National Weather Source Publication Hydrometeorology Report No. 52 (HMR-52)" to "Reference 5.1-2".  Added "See also Tier 2 Table 3G.1-2." at end of note.	0000-0064-1498
12	Table 5.1-1, Note (5)	Changed "ASCE 7-02 and HMR-52" to "References 5.1-1 and 5.1-2. See also Tier 2 Table 3G.1-2."	0000-0064-1498
13	Table 5.1-1, Note (6)	Revised first sentence to read: "Zero percent exceedance values are based on conservative estimates of historical high and low values for potential sites." Changed "the URD" to "Reference 5.1-3" in second sentence.	0000-0064-1498
14	Table 5.1-1, Note (7)	Deleted second sentence.	0000-0064-1498



### Tier 1 Changes From Revision 02 to Revision 03

15	Table 5.1-1, Note (8)	<p>Revised note to read:</p> <p>(1) This is the equivalent uniform shear wave velocity (<math>V_{eq}</math>) at seismic strains after the soil property uncertainties have been applied. <math>V_{eq}</math> is calculated to achieve the same wave traveling time over the depth equal to the embedment depth plus 2 times the largest foundation plan dimension below the foundation as follows:</p> $V_{eq} = \frac{\sum d_i}{\sum \frac{d_i}{V_i}}$ <p>where <math>d_i</math> and <math>V_i</math> are the depth and shear wave velocity, respectively, of the <math>i</math>th layer. The ratio of the largest to the smallest shear wave velocity over the mat foundation width at the foundation level does not exceed 1.7.</p> <p>(Note - RAI 3.7-31(b) action relocated here from Section 3.7.5.1. Last sentence incorporates response to RAI 3.8-93, Supplement 2)</p>	0000-0064-1498
16	Table 5.1-1, Note (10)	Editorial change – Replaced "don't" with "do not".	Editorial, no tech. change