

TIER 2 SECTION 7.1 REVISION 4 TO REVISION 5 CHANGE LIST

1.	C 7, Various	Changed “RPS” to “RTIF” or “RTIF, NMS” (as appropriate) throughout the text to differentiate between the content of the RTIF, NMS, and SSLC/ESF physical cabinets.
2.	C 7, Various	Replaced the term “channel” with “division” where appropriate for consistency among Chapter 7 sections
3.	C 7, Various	Updated the Name of BTP HICB-21 to “Guidance on Digital Computer Real-Time Performance” for consistency.
4.	C 7, Various	Replaced “primary containment” with “containment” since there is only one containment.
5.	S7.1, 2 nd para, 6 th bullet	Replaced “conformance of I&C systems” to “DCIS conformance” for clarity.
6.	S7.1.1, 1 st para, 3 rd bullet	Replaced “Gateways/datalinks” with “Datalinks and gateways (when necessary)” for clarity.
7.	S7.1.1, 1 st para, 5 th bullet	Deleted “with Firewalls” from 5 th bullet to allow for latitude in method of secure communications.
8.	S7.1.1, 2 nd para	Removed 2 nd sentence “The DCIS is subdivided into the Q-DCIS and the N-DCIS.” as redundant.
9.	S7.1.1, 4 th para, 2 nd sent	Replaced “Reference 3” with “Reference 4” for accuracy.
10.	S7.1.2, 1 st para, 1 st sent	Removed “comprises the safety-related portion of the DCIS” as redundant.
11.	S 7.1.2, 1 st para, 2 nd sent	Inserted “The Q-DCIS uses three diverse platforms: NUMAC for the RTIF functions, TRICON for SSLC/ESF functions, and independent logic controllers for the ATWS/SLC and vacuum breaker (VB) isolation function” for clarity.
12.	S7.1.2, 1 st para, 1 st bullet, 4 th dash	Replaced “function of the RPS for” with “subsystem of” to more accurately represent the design and avoid confusion between RTIF and RPS systems and functions.
13.	S7.1.2, 1 st para, 1 st bullet, 5 th dash	Added “Vacuum breaker (VB) isolation function of the containment system” consistent with the intent of Response to RAI 6.3-63 via MFN 08-346.

14.	S7.1.2, 1 st para 3 rd bullet	<ul style="list-style-type: none"> Removed “ECCS” from item (4) as redundant. Promoted “LD&IS Functions...” and “Control Room Habitability...” from a numbered element to a dashed element because they are not part of the ECCS. Replaced “monitoring and manual control functions” with “information systems” in final dash to broaden the scope of SSLC/ESF.
15.	S7.1.2, 3 rd para, 6 th sent	Replaced “and by N-DCIS gateways/datalinks” with “via datalinks and N-DCIS gateways (when necessary)” for consistency with subsection 7.1.3.3
16.	S7.1.2, 3 rd para, last sent	Inserted “the existence or function of” to better explain the relationship between N-DCIS and Q-DCIS.
17.	S7.1.2, 6 th para, 1 st sent	Changed “(and may also be independently monitored on the N-DCIS VDUs after appropriate isolation)” to “(the N-DCIS VDUs also have the capability to independently monitor the RTIF and NMS statuses but only after appropriate isolation and with no capability to control the Q-DCIS)” as committed in Response to RAI 7.1-61 via MFN 08-116.
18.	S7.1.2, 6 th para, 2 nd sent	Replaced “one-way dedicated communication path (gateways/datalinks)” with “the required safety-related isolation and via a one-way dedicated communication path (datalink and gateway if necessary)” for clarity. Note: MFN 08-116 changed “(gateways/datalinks)” to “(gateway/datalink) which has been revised as described above for clarity.
19.	S7.1.2, 6 th para, 3 rd sent	Added “and the VDUs have no capability to control the RTIF or the NMS” to clarify control capability of the safety-related VDUs.
20.	S7.1.2, 6 th para, last	Changed “systems but manual control capability only for the SSLC/ESF safety-related systems, all” to “systems but manual control capability only for the SSLC/ESF safety-related systems in the same division as the safety-related VDU, all” to clarify control capability of the safety-related VDUs.
21.	S7.1.2, 8 th para, 2 nd sent	Replaced “either of the two diesel generators or from off site power (Refer to Subsection 8.1.5.2.1” with “diesel generators or from off-site power (Refer to Chapter 8” due to the addition of ancillary diesel generators.
22.	S7.1.2.1	Removed “to N-DCIS” as committed in Response to RAI 7.1-63 via MFN 08-116.
23.	S7.1.2.2, Heading	Added “Nonsafety-Related” to connect power generation with nonsafety-related functions.

24.	S7.1.2.2	Replaced “gateways/datalinks” with “via datalinks and gateways (when necessary)” for consistency with subsection 7.1.3.3.
25.	S7.1.2.3, 1 st para	Added “for safety-related I&C systems” to specify the criteria of IEEE Std. 603 to which Q-DCIS conforms.
26.	S7.1.2.3, 2 nd para, 3 rd sent	Replaced “UPS” with “safety-related UPS” for clarity.
27.	S7.1.2.3, 2 nd para, last sent	Added “, in accordance with the N-2 design basis” to serve as an introduction to the following N-2 information.
28.	S7.1.2.3, 3 rd para	Added discussion to define for clarity the phrase “N - 2”.
29.	S7.1.2.3, 4 th para, 2 nd sent	Replaced “addresses” with “summarizes” because the level of detail in 7.1.2.4 is less than in other sections where conformance is addressed.
30.	S7.1.2.4	<ul style="list-style-type: none"> • Inserted “10 CFR 50.44” for consistency with DCD Table 7.1-1. • Inserted “10 CFR 50.49,” for consistency with Subsection 7.1.6.6.1.5. • Deleted “1042” from 3rd bullet due to non-usage in the DCD. • Replaced “s67.02” with “67.02.01” in 4th bullet for accuracy. • Inserted RGs 1.89 and 1.209 consistent with the intent of RAI 7.1-47 via MFN 07-430. • Inserted RG 1.100 for consistency with Subsection 7.1.6.6.1.5 • Inserted BTP 10 as committed by Response to RAI 7.1-66 transmitted via MFN 08-385.
31.	S7.1.2.5, 2 nd sent	Deleted parenthetical statement, “(also the digital-to-analog (D/A) converters (if used))” in accordance with the response to RAI 7.9-11 transmitted via MFN-07-336.
32.	7.1.2.8, 1 st -3 rd sent	Replaced “are safety-related entities of the DCIS. The RPS, which is the designated reactor trip system, and the SSLC/ESF, which is the designated ESF actuation system. The automatic decision-making and trip logic functions associated with the safety-related RPS and ESF actuation system.” with “include equipment for the Reactor Trip System (RTS), and Engineered Safety Features Actuation System (ESFAS). The RTS includes the RPS function, the SRNM and PRNM functions of the NMS, and the SPTM function of the CMS. The SSLC/ESF is the designated ESFAS. The automatic decision-making and trip logic functions associated with the safety-related RTS and ESFAS” to better describe Q-DCIS major components.

33.	7.1.2.8, last sent	Added “The Q-DCIS also includes the ATWS/SLC, CMS, and the VB isolation function” for completeness.
34.	S7.1.2.8.2.1, last para	Revised this paragraph to add discussion of vacuum breaker isolation functions consistent with the intent of Response to RAI 6.3-63 via MFN 08-346.
35.	S7.1.2.8.2, 1 st bullet	Replaced “At 15%” with “Between 1% and 15%” to more accurately represent SRNM design based on PRNM information later in the bulleted list.
36.	S7.1.2.8.2, 2 nd bullet	Removed the last sentence “In the low end of the power range from 1% to 15% of rated power, the SRNM and PRNM monitoring functions overlap.” and moved the information to the SRNM section prior to remove redundancy.
37.	S7.1.2.8.2, last bullet	Added “communication through qualified safety-related isolation devices and via” for consistency with Subsection 7.1.3.3.
38.	S7.1.2.8.3.1.1 (7.1.2.8.3.2 Rev 4)	Renumbered this subsection since the ADS is part of the ECCS.
39.	S7.1.2.8.3.1.2 (7.1.2.8.3.3 Rev 4)	Renumbered this subsection since the GDCS is part of the ECCS.
40.	S7.1.2.8.3.1.3 (7.1.2.8.3.4 Rev 4)	Renumbered this subsection since the ICS is part of the ECCS.
41.	S7.1.2.8.3.1.3, 1 st sent.	Removed “is a safety-related system that” to remove redundancy.
42.	S7.1.2.8.3.1.3, last sent.	Added reference to 7.4.4 for increased ease of navigation.
43.	S7.1.2.8.3.1.4 (7.1.2.8.3.5 Rev 4)	Renumbered this subsection since the SLC system is part of the ECCS.
44.	S S7.1.2.8.3.1.4, 1 st para, 2 nd sent.	Added “, by adding soluble poison” for clarity.
45.	S7.1.2.8.3.2 (7.1.2.8.3.6 Rev 4)	Renumbered this subsection due to changes in numbering described above.
46.	S7.1.2.8.3.2, 1 st para, last sent	Added “Refer to Subsection 7.3.3 for additional information” for ease of navigation.

47.	S7.1.2.8.3.3 (7.1.2.8.3.7 Rev 4)	Renumbered this subsection due to changes in numbering described above.
48.	S7.1.2.8.4 (7.1.2.8.3.8 Rev 4)	<ul style="list-style-type: none"> Renumbered this subsection due to changes in numbering described above. Changed heading from “Anticipated Transient Without Scram Standby Liquid Control Description Summary” to “ATWS/SLC System Description Summary” to correct the name of the system.
49.	S7.1.2.8.4, 2 nd para	Replaced “7.1.2.8.3.5” with “7.1.2.8.3.1.4” for accuracy.
50.	S7.1.2.8.5 (7.1.2.8.3.9 Rev 4)	Renumbered this subsection due to changes in numbering described above.
51.	S7.1.2.8.5	<ul style="list-style-type: none"> Revised 2nd and 3rd sentences as committed in Response to RAI 6.2-139 transmitted via MFN 08-357. Replaced “This brief description is included here for completeness” with “Refer to Subsections 7.3.2 and 6.2.2 for additional information” in last sentence because previous text added little value and reference aides in document navigation.
52.	S7.1.2.8.6 (7.1.2.8.4 Rev 4)	Renumbered this subsection due to changes in numbering described above.
53.	S7.1.2.8.6	Revised reference numbering due to section numbering changes.
54.	S7.1.2.8.6.1 (7.1.2.8.4.1 Rev 4)	Renumbered this subsection due to changes in numbering described above.
55.	S7.1.2.8.6.1, Heading	Removed “Function” from heading and changed “System” to “Subsystem” because the system and not the function is described.
56.	S7.1.2.8.6.2 (7.1.2.8.4.2 Rev 4)	Renumbered this subsection due to changes in numbering described above.
57.	S7.1.2.8.6.2, Heading	Removed “Functions” from heading because the system and not the function is described.
58.	S7.1.2.8.6.2, 2 nd sent	Replaced “radiation levels, pressures, hydrogen/oxygen concentrations, and dew point values” with “radiation levels, pressures, temperatures, hydrogen/oxygen concentrations, and dew point/humidity values” for completeness.

59.	S7.1.2.8.7	Inserted this subsection consistent with the intent of Response to RAI 6.3-63 via MFN 08-346.
60.	S7.1.3.1.1, 1 st para, 3 rd bullet	Deleted “and support safety-related system monitoring and operator input to/from the MCR and RSS VDUs” as redundant to the following bullet.
61.	S7.1.3.1.1, 1 st para, 7 th bullet	Replaced “as output from the RMUs” with “via load drivers” for clarity.
62.	S7.1.3.1.2	Replaced “safety-related isolation devices to the gateways/datalinks to the N DCIS that provide interfaces to” with “qualified safety-related isolation devices to the N-DCIS for use by” for consistency with subsection 7.1.3.3.
63.	S7.1.3.1.3, 1 st para, 3 rd sent	Removed “-related” from description of limits as committed in Response to RAIs 16.2-146 & 16.2-149 via MFN 07-536.
64.	S7.1.3.1.3, 2 nd para, 4 th sent	Removed “-related” from description of limits and added “(where applicable)” as committed in Response to RAIs 16.2-146 & 16.2-149 via MFN 07-536.
65.	S7.1.3.1.3 3 rd para	Removed “proven instrument error and setpoint calculation methodology described in “General Electric Instrument Setpoint Methodology”,” as committed in Response to RAIs 16.2-146 & 16.2-149 via MFN 07-536.
66.	S7.1.3.2, 1 st para, 2 nd sent	Replaced “the fiber optic cable signal transmission path, the SSLC cabinets, the RTIF cabinets,” with “the intra-divisional fiber optic cable signal transmission pathways, the RTIF cabinets, the NMS cabinets, the SSLC/ESF cabinets,” for completeness and consistency.
67.	S7.1.3.2, 2 nd para, 3 rd bullet.	Added “RTIF and NMS CIMS” for consistency with Subsection 7.1.3.3.
68.	S7.1.3.2, 2 nd para, 5 th bullet.	Deleted “test” from “test cabinets” in order to include additional RTIF, NMS,SSLC/ESF cabinets.
69.	S7.1.3.2, 2 nd para, 6 th bullet.	Replaced “The N-DCIS through isolated digital gateways/datalinks” with “The N-DCIS through qualified safety-related isolation devices via datalinks and gateways (when necessary)” for consistency with Subsection 7.1.3.3.
70.	S7.1.3.2, 4 th para, 4 th sent	Replaced “The field sensors and wiring” with “The field sensors, actuators, and wiring” for completeness.
71.	S7.1.3.2, 6 th para	Replaced “the isolated divisional gateways/datalinks for communication with the N DCIS” with “through qualified safety-related isolation devices (CIMS) for communication with the N-DCIS via datalinks and gateways (when necessary)” for consistency with Subsection 7.1.3.3.

72.	S7.1.3.2, 7 th para	Paragraph revised as committed in Response to RAI 7.1-55 via MFN 07-596. In addition to the text committed in MFN 07-596 the current text replaces “operating on battery power” with “operating on only battery power” for clarity.
73.	S7.1.3.2.1	Added “The Reactor Trip Systems include the RPS, NMS, and SPTM.” to define the reactor trip system.
74.	S7.1.3.2.1.3, Heading	Changed “System” to “Subsystem” and deleted “Function” to more accurately describe SPTM and because the subsystem and not the function is being described.
75.	S7.1.3.2.2, Heading	Added “Safety System Logic and Control /” to identify the specific system that performs ESF.
76.	S7.1.3.2.2	Added additional text “ <i>The SSLC/ESF system performs the control logic processing of the plant sensor data and manual control switch signals activating the functions of the LD&IS (non-MSIV), ECCS, and CRHS.</i> ” consistent with Subsection 7.3.5 and relocated text “ <i>Input signals from redundant channels of safety-related instrumentation are used to perform logic operations that result in decisions for safety-related action. Trip logic outputs to the actuation devices, such as pilot solenoid valves and squib valves, initiate the appropriate plant protection actions. Refer to Subsection 7.3.5 for additional information</i> ” from 7.1.3.2.2.5 (Rev 4) to better organize the information and to add an introduction to the following subsections.
77.	S7.1.3.2.2.1	Removed “Refer to Subsection 7.3.1 for additional information” and redistributed the reference to each individual system (7.4.4 for ICS, 7.3.1.1 for ADS, 7.3.1.2 for GDCS and 7.4.1 For SLC).
78.	S7.1.3.2.2.2	Replaced text and heading of this subsection with “Deleted” because the content of subsection 7.1.2.8.3.1.3 is sufficient.
79.	S7.1.3.2.2.4, 1 st sentence	<ul style="list-style-type: none"> • Inserted “safety-related” to describe CRHS because this information does not appear previous to this location. • Deleted “is an ESF system that” because focus of subsection is on SSLC/ESF as opposed to ESF.
80.	S7.1.3.2.2.5	Replaced text and heading of this subsection with “Deleted”. The 1 st sentence was completely removed as unnecessary and the remaining text was moved to S7.1.3.2.2.
81.	S7.1.3.2.2.6	Revised text to point to Subsections 7.1.2.8.5 and 6.2.2. Note: Text duplicated in this subsection from 7.1.2.8.5 committed by Response to RAI 6.2-139 (MFN 08-357) has been removed to avoid unnecessary repetition.

82.	S7.1.3.2.3	Added text “Safe shutdown systems include the SLC System and the RSS.” as an introduction to the following subsections.
83.	S7.1.3.2.3.1, last sent	Revised reference numbering due to section numbering changes.
84.	S7.1.3.2.4	Added text “Safety-related information is provided by the Post-accident Monitoring (PAM) instrumentation, the CMS instrumentation, and Process Radiation Monitoring System (PRMS) instrumentation.” as an introduction to the following subsections.
85.	7.1.3.2.4.3, 1 st sent	<ul style="list-style-type: none"> • Removed “main steam lines, ” as committed in Response to RAI 14.3-391 via MFN 08-279. • Moved reference to Subsection 7.1.5.2.2.1 to 2nd sentence. • Replaced “the drywell, discharges from the ICS, vent discharges, and liquid and gaseous effluent streams” with “discharges from the ICS vent, and ventilation discharges” to support HCW/LCW PRMS drains safety class revision.
86.	S7.1.3.2.4.3 last sent	Replaced “7.5.3” with “11.5.3” as it is a better reference.
87.	S7.1.3.2.5, 2 nd para	Revised this paragraph for consistency with Section 7.6.
88.	S7.1.3.2.6, 2 nd para	Revised paragraph describe new crosstie design.
89.	S7.1.3.3, 1 st para, 1 st sent	Revised sentence to more clearly describe safety-related isolation and the use of datalinks and gateways.
90.	S7.1.3.3, 2 nd para	<p>Moved this paragraph which was previously located after the 2nd paragraph of 7.1.3.3.5 for improved organization.</p> <p>Replaced “The Q-DCIS also provides an electrically noise free transmission path for” with “The fiber optic cable provides a transmission path immune from EMI for” for accuracy.</p>
91.	S7.1.3.3.1	Inserted new Subsection heading for ease of navigation.
92.	S7.1.3.3.1, 1st para	Revised the entire paragraph to more clearly describe safety-related isolation and the use of datalinks and gateways.
93.	S7.1.3.3.1, 2 nd para	<ul style="list-style-type: none"> • Moved this paragraphs previously located after the 1st paragraph in Subsection 7.1.3.3.2 for improved organization. • Inserted “and separation (electrical, physical, data, and communications) as committed in Response to RAI 7.1-64 via MFN 08-116.

94.	S7.1.3.3.1, 3 rd & 4 th para	<ul style="list-style-type: none"> • Moved these paragraphs previously located after the paragraph in Subsection 7.1.3.3.3 for improved organization. Note: The text “governed by References 7.1-10 and 7.1-12” added to the 3rd sentence of the 3rd paragraph is added in an effort to address the concern(s) of the NRC as communicated in RAI 7.1-65 S01 via MFN 08-460, May 6, 2008. • Replaced “These protocols control the transmission and acceptance” with “These protocols control the transmission, acceptance, and authentication” for completeness.
95.	S7.1.3.3.2	Inserted new Subsection heading for ease of navigation.
96.	S7.1.3.3.2, 1 st para	Revised 1 st , 2 nd & 4 th sentences to more clearly describe safety-related isolation and the use of datalinks and gateways.
97.	S7.1.3.3.2, 2 nd para	<ul style="list-style-type: none"> • Added “independent” in 1st and 5th sentences for clarity. • Added “Other than the RPS and NMS point-to-point communication used for two-out-of-four voting logic,” for completeness. • Replaced “paths are redundant to support” with “pathways are redundant in order to support” in 2nd sentence for clarity. • Added “The RPS and NMS two-out-of-four voting logic communication redundancy is acceptable because loss of communication is interpreted as a trip from the sending division” more accurately describe RPS and NMS communication. • Deleted “A single communication or power failure is tolerated” previously located after the 4th sentence as redundant to 4th sentence.
98.	S7.1.3.3.2, 3 rd para, 1 st sent	Changed “Generally, a system of isolators within the safety-related systems -described above and gateways/datalinks within N-DCIS transmit safety-related data to the N-DCIS” to “The safety-related fiber optic CIMs (which are the isolation devices, as described above) within the Q-DCIS along with datalinks and gateways (when necessary) within the N-DCIS transmit safety-related data to the N-DCIS via fiber optic cable” to more clearly describe safety-related isolation and the use of datalinks and gateways.
99.	S7.1.3.3.2, 4 th para, 4 th & 5 th sent	Revised text as committed in Response to RAI 7.1-65 transmitted via MFN 08-319.

100.	S7.1.3.3.3	<ul style="list-style-type: none"> • Inserted new Subsection heading for ease of navigation. • Revised entire paragraph to more clearly describe safety-related isolation and the use of datalinks and gateways.
101.	S7.1.3.3.4	Inserted new Subsection heading for ease of navigation.
102.	S7.1.3.3.4, 1 st , 2 nd , and 4 th para	Revised the text as committed in Response to RAI 7.1-59 via MFN 07-560 with minor editorial changes.
103.	S7.1.3.3.4, 3 rd para	<ul style="list-style-type: none"> • Revised the text as committed in Response to RAI 7.1-59 via MFN 07-560 (with minor editorial changes). • Moved 2nd & 3rd sentences from 7.1.6.6.1.7 to more clearly describe safety-related isolation and the use of datalinks, gateways and NMS calibration. • Changed “LPRM” to “LPRM and APRM” in 2nd sentence for clarity.
104.	S7.1.3.3.5	Inserted new Subsection heading for ease of navigation.
105.	S7.1.3.3.5, 1 st para	Revised 2 nd and 3 rd sentences to more clearly describe safety-related isolation and the use of datalinks and gateways.
106.	S7.1.3.3.5, 2 nd para, 1 st sent	Replaced “SSLC/ESF units” with “SLC/ESF cabinets” for consistency.
107.	S7.1.3.3.5, 2 nd para, 3 rd sent	Added “safety-related fiber optic” to more completely describe the system.
108.	S7.1.3.3.5, 2 nd para, 4 th sent	<ul style="list-style-type: none"> • Replaced “SSLC/ESF units are sent via the redundant communication” with “SSLC/ESF cabinets are sent via the redundant Q-DCIS communication” to more completely describe the system and for consistency. • Added “via load drivers” for clarity.
109.	S7.1.3.3.5, 3 rd para	<ul style="list-style-type: none"> • Replaced “logic” with “(SSLC/ESF) logic” in 2nd sentence for clarity • Added 3rd sentence “The VDUs provide access to a full range of plant parameters in accordance with the requirements of 10 CFR 50.34(f)(2)(iv), TMI Action Item I.D.2” as committed in Response to RAI 7.2-4 S01 via MFN 06-146 S01.
110.	S7.1.3.3.5, 4 th para	Moved “, with a high degree of confidence” from 1 st sentence to “This is accomplished with a high degree of confidence” in the 2 nd sentence for readability.
111.	S7.1.3.3.6	Inserted new Subsection heading for ease of navigation.

112.	S7.1.3.3.6, 1 st para	<ul style="list-style-type: none"> Revised 2nd and last sentence to more clearly describe safety-related isolation and the use of datalinks and gateways and to clarify N-2 design. Removed 3rd sentence (Rev 4) “The four divisions operate asynchronously and do not depend on the interdivisional data link communication for correct operation of their safety-related logic or functions” as it is no longer accurate. Replaced “more than two of these types of failure are required to disable the safety-related functions” with “safety-related systems are capable of performing all safety-related functions, with three out of four safety-related divisions available in the presence of a single failure” in last sentence for consistency with N-2 definition.
113.	S7.1.3.3.6, 2 nd para, 1 st sent	Deleted “dual redundant data communication channels per division and the” as committed in Response to RAI 14.2-71 via MFN 07-473.
114.	S7.1.3.3.6, 2 nd para, 3 rd sent	Changed “The fiber optic transmitters/receivers, fiber optic cable” to “The safety-related fiber optic CIMs (transmitters/receivers), fiber optic cable” to more clearly describe safety-related isolation and the use of datalinks and gateways.
115.	S7.1.3.3.7	Inserted new Subsection heading for ease of navigation.
116.	S7.1.3.3.7, 1 st para,	Replaced “channel” with “pathway” and “channels” with “pathways” in 5th and 6th sentences for consistency and clarity.
117.	S7.1.3.3.8	Inserted new Subsection heading for ease of navigation.
118.	S7.1.3.4,	Entire subsection was rewritten as committed in Response to RAIs 16.2-145 (via MFN 08-372), and 16.2-152 (via MFN 08-372).
119.	S7.1.4, 1 st para	Replaced bulleted list with reference to 7.1.4.8 for maintainability and as committed in telephone communication to the NRC on April 3 rd , 2008.
120.	S7.1.4, 6 th para, last sent	Deleted “either of the two ” due to the addition of ancillary diesel generators.
121.	S7.1.4.2, 1 st sentence	Added “nonsafety-related” to clarify the design basis.
122.	S7.1.4.2, 1 st para, 1 st bullet.	Replaced “divisions” with “components” since there are no nonsafety-related divisions.
123.	S7.1.4.2, 1 st para, 6 th bullet.	Added “authorized external systems, including” and deleted “generally provide information to other external users” as committed in Response to RAI 7.1-69 via MFN 08-250.

124.	S7.1.4.3, 1 st sentence	Deleted “classified as a nonsafety-related system. It is” to remove redundancy.
125.	S7.1.4.3, 4 th para, 2 nd sent	Replaced “addresses” with “summarizes N-DCIS” because the level of detail in 7.1.4.4 is less than in other sections where conformance is addressed.
126.	S7.1.4.4	<ul style="list-style-type: none"> Deleted “323, 344” and “383, 384”, and replaced “1042” with “1050” in 3rd bullet to remove inconsistencies with Table 7.1-1. Added “S67.02.01” in 4th bullet based on review of NRC Generic Letter 2008-01. Added “-1,” to last bullet for consistency with Table 7.1-1.
127.	S7.1.4.5, 1st para	Deleted “(Reference 7.1-10)” because the reference is not specifically called out in the sentence.
128.	7.1.4.8.1	<ul style="list-style-type: none"> In title replaced “GE Nuclear Energy” with GENE to avoid confusion. Replaced “GEH” with “GENE” in introductory sentence for clarity. Replaced “a subset of reactor scram and the ECCS” with “diverse backup to the RPS and SSLC/ESF” in 4th bullet for consistency with Subsection 7.8.1. Replaced “provides data to” with “includes” for technical accuracy and consistency with Subsection 7.7.6.
129.	7.1.4.8.2, 1 st para	<ul style="list-style-type: none"> Replaced “Chillers” with “Nuclear Island Chilled Water System (NICWS)” in 7th bullet for clarity. Added “Ancillary and standby” to 10th bullet for clarity. Added bullets for “Low voltage electrical system”, “Uninterruptible power supplies (UPS)”, and “MCR and RSS panel displays” for completeness.
130.	7.1.4.8.2, 3 rd para	<ul style="list-style-type: none"> Added “its respective nonsafety-related batteries for two hours and then by” since batteries are used before diesel generators. Deleted “in the Standby AC On-Site Power Supply System” due to the addition of ancillary diesel generators in addition to the standby diesel generators.

131.	7.1.4.8.3, 1 st para	<ul style="list-style-type: none"> • Added “The FWCS, including RPV level and feedwater temperature control;” as 3rd bullet for completeness. • Added “The SB&PC System” as 5th bullet for completeness. • Added “, including protective relaying,” to 8th bullet for clarity. • Added “Vendor-furnished BOP systems” as last bullet for completeness.
132.	7.1.4.8.4, 1 st para	<ul style="list-style-type: none"> • Added “Computer” to Subsection heading for clarity. • Deleted “PCF distributed throughout the N-DCIS segments in redundant workstations and/or controllers. PCF provide” from 1st bullet as redundant. • Added “Core thermal power/flow calculations” as 2nd bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list. • Added “Fire Protection System (FPS) data through datalinks and gateways (if necessary)” as 4th bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list. • Added “Transient recording” as 9th bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list. • Added “Nonsafety-related PAM displays” as 10th bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list. • Added “MCR and RSS VDUs” as 11th bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list. • Added “Nonsafety-related process and area radiation monitoring” as last bullet as part of an effort to consolidate multiple repetitive lists throughout Section 7.1 into one list.
133.	S7.1.5, 1 st & 2 nd para (Rev 4)	Deleted the first paragraph and the first sentence of second paragraph as redundant text.
134.	S7.1.5.1.2, 7 th bullet	Added “qualified safety-related isolation devices and datalinks to” for consistency with Subsection 7.1.3.3.
135.	S7.1.5.1.2, 15 th bullet	<ul style="list-style-type: none"> • Replaced “power, water level” with “reactor power, RPV water level” in 2nd sentence for clarity. • Replaced “NUREG-0737, Supplement 1” with “10 CFR 50.34(f)(2)(iv) TMI Action Item I.D.2” consistent with the intent of Response to RAI 7.2-4 S01 transmitted via MFN-06-146 Supp 1

136.	S7.1.5.1.2, last bullet	Replaced “provided by the plant computer system of the N-DCIS” with “Provide operator aids from the PCF, such as safety parameter displays, transient data recording, analysis, archiving, alarm processing, and sequence of events processing” for increased readability. This bullet was combined with the previous bullet in Rev 4 but was separated for readability.
137.	S7.1.5.2, 1 st sentence	Deleted “is a nonsafety-related network that” as redundant.
138.	S7.1.5.2, 2 nd para, 1 st bullet	Replaced GEH with GENE for clarity.
139.	S7.1.5.2, 3 rd & 5 th para	<ul style="list-style-type: none"> • Updated text in accordance with the response to RAI 7.9-4 S01 transmitted via MFN-07-285 Supplement 1. • Added 1st sentence of 3rd paragraph for clarity.
140.	S7.1.5.2, 8 th para	Replaced “data paths between themselves” with “available data path between each other” for clarity.
141.	S7.1.5.2, 9 th para	Replaced bulleted list with reference to 7.1.4.8 for maintainability and as committed in telephone communication to the NRC on April 3 rd , 2008..
142.	S7.1.5.2.1.3, 1 st sent	Replaced “the fuel, PCCS/ICS, and GDCS pools, by pumping pool water through heat exchangers and demineralizers” with “the fuel pool, spent fuel pool, suppression pool, auxiliary pools, and GDCS pools, by pumping pool water through heat exchangers and a water treatment unit (equipped with prefilters and demineralizers)” for clarity and consistency with DCD Subsection 9.1.3.
143.	S7.1.5.2.1.3, last sent	Replaced “7.5.5” with “9.1.3” in order to provide a direct reference to the location of the appropriate information.
144.	S7.1.5.2.2	Added “Nonsafety-related information is provided by PRMS and ARMS.” as an introduction to the following subsections.
145.	S7.1.5.2.2.1	<ul style="list-style-type: none"> • Replaced “discharges from the ICS, vent” with “ventilation and stack” in 1st sentence to support HCW/LCW PRMS drains safety class revision. • Replaced “7.5.3” with “11.5.3” in last sentence for accuracy.
146.	S7.1.5.2.3	Added “Descriptions of nonsafety-related control systems follow.” as an introduction to the following subsections.
147.	S7.1.5.2.3.2, 2 nd sent	Replaced “low power setpoint (LPSP)” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints.
148.	S7.1.5.2.3.3	Revised paragraph as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).

149.	S7.1.5.2.3.4, 2 nd para, 1 st & 2 nd sent	Combined elements of first three sentences (Rev 4) into 1 st two sentences to remove redundancy and consolidate similar ideas.
150.	S7.1.5.2.3.4, 2 nd para, 2 nd sent	Added” (with the capability to perform system level automation)” for clarity.
151.	S7.1.5.2.3.4, last para, 1 st sent	Added “any automation sequence including” for clarity.
152.	S7.1.5.2.3.7, 2 nd sentence	Replace "calibration" with "calculation" for consistency with other DCD Sections.
153.	S7.1.5.2.3.7, last sentence	Deleted “safety-related” since not all fuel thermal limits are safety-related.
154.	S7.1.5.2.3.8, 1 st sent	Replaced “Primary Containment Volume” with “containment” for consistency.
155.	S7.1.5.2.3.8, last sent	Replaced reference to 7.7.7 with reference to 6.2.5.2 as it is more accurate.
156.	S7.1.5.2.3.9, 1 st para, 1 st sent	Deleted “Although not required for safety,” and “The safety-related ATWS mitigation function using liquid boron injection is part of the diverse I&C functions” to reduce confusion.
157.	S7.1.5.2.3.9, 1 st para, 3 rd sent	<ul style="list-style-type: none"> Replaced “This diverse I&C function, called DPS, is implemented in a highly reliable” with “The nonsafety-related diverse I&C functions are implemented in the DPS. The DPS functions are implemented in a highly reliable” for clarity. Replaced “different from any” with “diverse from their counterparts on” for clarification.
158.	S7.1.5.2.3.9, 2 nd para, 3 rd bullet	Reworded first sentence for consistency with Section 7.8.
159.	S7.1.5.2.3.9, 2 nd para, last bullet, last sent (Rev 4)	Deleted “This is also part of the ATWS mitigation function.” because discussion of the safety-related ATWS mitigation function is not appropriate in this portion of the DCD text on nonsafety-related control systems.
160.	S7.1.5.2.3.10, 1 st para	<ul style="list-style-type: none"> Replaced “The N-DCIS accepts the redundant loss of feedwater heating signals from the FWCS and the turbine trip and load rejection signals from the turbine control system, performs two-out-of-three voting on each, and then combines them as an “OR” function to become” with a reference to 7.8.1.1 in 1st sentence to remove redundancy. Deleted “which is part of the DPS and RC&IS systems’ scope” in accordance with RAI 4.6-28 via MFN-07-446. Deleted last 2 sentences of the paragraph for clarity and to remove redundancy.

161.	S7.1.5.2.3.10, 2 nd para	<ul style="list-style-type: none"> • Combined first two sentences (Rev 4) into 1st sentence for increased readability. • Replaced “below” with “in Subsection 7.1.5.2.3.12” in last sentence for clarity.
162.	S7.1.5.2.3.10, 3 rd para	<ul style="list-style-type: none"> • Deleted “from DPS” in first sentence to more accurately represent the design. • Replaced “panel” with “test panel” in first sentence for clarity • Replaced “rod groups” with “rod groups (SRI) and “rods” with “control rods” in 3rd sentence for clarity. • Replaced “in the solenoid return” with “in the HCU scram solenoid 120 VAC return” in 4th sentence for clarity.
163.	S7.1.5.2.3.11, 1 st para, 1st sent	Changed “The N-DCIS accepts the redundant ARI signals from the DPS and performs two-out-of-three voting of these signals to become the N-DCIS scope ARI initiation signal” to “The N-DCIS performs two-out-of-three voting of the redundant ARI signals from the DPS to become the N-DCIS ARI initiation signal” for consistency with Section 7.8
164.	S7.1.5.2.3.11, 1 st para, 2 nd sent	Replaced “Redundant ARI command signals are sent to the RC&IS where each of the dual RAPI channels performs a two-out-of-three vote and initiate the RAPI channel logic associated with accomplishing the ARI (motor run-in) function” with “Each of the RC&IS dual RAPI channels performs two-out-of-three voting of the redundant ARI initiation signals and initiates the RAPI channel logic associated with accomplishing the FMSRD Run-in logic” for consistency with Section 7.8.
165.	S7.1.5.2.3.11, 2 nd para	Revised this paragraph to describe the direct interface between DPS and CRD to allow HCU scram valves to open.
166.	S7.1.5.2.3.11, 2 nd & 3 rd para	<ul style="list-style-type: none"> • Revised these paragraphs to describe the direct interface between DPS and CRD to allow HCU scram valves to open. • Replaced “as discussed below” with “as discussed in Subsection 7.1.5.2.3.12” in last sentence for clarity.
167.	S7.1.5.2.3.11, 4 th para (Rev 4)	Deleted this paragraph / sentence because not every ARI initiator causes a scram signal.
168.	S7.1.5.2.3.12, 1 st para, 1 st sent	Replaced “SCRRI” with “SCRRI/SRI” for clarity.
169.	S7.1.5.2.3.12, 1 st para, last sent	Deleted “of the RC&IS that” to remove redundancy.

170.	S7.1.5.2.3.12, 2 nd para, 1 st sent.	<ul style="list-style-type: none"> Replaced “For the SCRRI or ARI motor run-in function of the RC&IS equipment to be initiated, the ERI signals to the IMCs must be concurrent with the IMCs receiving the SCRRI or ARI related command signals transmitted from the RAPI logic” with “For the SCRRI or ARI and FMCRD Run-in logic of the RC&IS equipment to be initiated, the ERI signals to the IMCs must be concurrent with the RAPI logic SCRRI/SRI command related signal or ARI related command signals to the IMCs” for greater clarity and consistency with section 7.8.
171.	S7.1.5.2.4, 2 nd para, 6 th bullet, 1 st sent	Replaced “flow” with “coolant flow rate” for clarity.
172.	S7.1.5.2.4.1, 1 st sentence	Replaced “power, water level” with “reactor power, RPV water level” for clarity.
173.	S7.1.5.2.4.1, 2 nd sent	Updated text in accordance with the response to RAI 7.2-4 S01 transmitted via MFN 06-146 Supplement 1.
174.	S7.1.5.2.4.1, last sent	Replaced “main” with “WDP” for clarity.
175.	S7.1.5.2.4.2, 1 st para 5 th bullet, 1 st sent	Replaced “power, water level” with “reactor power, RPV water level” for clarity.
176.	S7.1.5.2.4.2, 1 st para 7 th bullet	Added “for display” for clarity.
177.	S7.1.5.2.4.2, 1 st para 8 th bullet	<ul style="list-style-type: none"> Deleted “Navigational or Top Level Displays” for conformity with the rest of the list. Replaced “Displays” with “variables” for clarity in 3rd dash. Replaced” alarms” with “PGCS parameters” for clarity in 4th dash.
178.	S7.1.5.2.4.2, 3 rd para	Replaced “This interface is not part of the PCF scope. The RC&IS interface” with “and” to remove superfluous information.
179.	S7.1.5.2.4.3 1 st para	Replaced “accessible in the MCR VDUs, and” with “accessible via the MCR VDUs and RSS VDUs, and” for completeness and clarity.
180.	S7.1.5.2.4.3 2 nd para, 2 nd sent	Replaced “whether” with “whether or not” for clarity.
181.	S7.1.5.2.4.3 3 rd para 2 nd bullet, 2 nd dash	Added “aggregated and” to better describe AMS function.

182.	S7.1.5.2.4.5, 14 th bullet	Added “based on information from those systems' continuous self diagnostic checks” for clarity.
183.	S7.1.5.2.4.7	Deleted “for the PCF” as redundant.
184.	S7.1.5.2.4.8, 5 th para	<ul style="list-style-type: none"> Deleted “automatically, and to” from 1st sentence because of the use of “automatically” earlier in the sentence. Added further detail on calibration data and reference to Subsection 7.1.3.3 in 2nd sentence for greater clarity.
185.	S7.1.5.2.4.10, 1 st para, 1 st sent	Replaced “Time tagging at the millisecond level is a function of the TRA” with “The N-DCIS clock provides the capability to time tag all cabinets’ data on the N-DCIS, including Q-DCIS data sent to the N-DCIS (through properly isolated nonsafety-related gateways) at the millisecond level for TRA” for clarity.
186.	S7.1.5.2.4.10, 1 st para, 3 rd sent	Updated text in accordance with the response to RAI 7.1-58 transmitted via MFN-07-505.
187.	S7.1.5.2.4.10, 3 rd para.	<ul style="list-style-type: none"> Modified text, in accordance with the response to RAI 7.9-8 S01 transmitted via MFN-07-285 Supplement 1, to indicate the use of nonsafety-related GPS-synchronized clocks. Added “These clocks (the N-DCIS clocks) provide the network time to all N-DCIS components.” for clarity.
188.	S7.1.5.2.5, 1 st bullet, 2 nd sent	Inserted “N-DCIS” to describe RMUs for clarity.
189.	S7.1.5.2.5, 1 st bullet, 3 rd sent	Deleted “either to the network switch cabinets or” as it no longer is an accurate description of the design.
190.	S7.1.5.2.5, 2 nd bullet, 2 nd sent	Deleted “either directly or through the network switch cabinets” as it no longer is an accurate description of the design.
191.	S7.1.5.2.5, 2 nd bullet, last sent	Replaced “so this control is not dependent on signals routed from another network switch segment” with “and within a controller cabinet and its connected RMUs such that this control is not dependent on signals routed from another network switch segment nor dependent on the operation of the N-DCIS networks” for clarity.
192.	S7.1.5.2.5, 5 th bullet	Replaced “gateways/datalinks” with “datalinks and gateways (when necessary)” for consistency with subsection 7.1.3.3
193.	S7.1.5.2.5, 7 th bullet, 3 rd sent	Replaced “The N-DCIS has no control-related inputs to the safety-related -systems with the exception of the NMS for LPRM and APRM calibration functions,” with “The nonsafety-related (N-DCIS) systems have no control-related inputs to the safety-related (Q-DCIS) systems” for clarity and to reduce repetition of information in 7.1.3.3.

194.	S7.1.5.2.5, 7 th bullet, 4 th sent	Replaced “detail on this communication and transmission of time synchronization” with “details on gateways, their communication, and transmission of time tagging” because the divisions of Q-DCIS operate asynchronously and are not synchronized with the operation of the N-DCIS and for consistency with 7.1.3.3.
195.	S7.1.5.2.5, 7 th bullet, 5 th sent (Rev 4)	Deleted “Otherwise, communication is one-way from the Q-DCIS to the N-DCIS” as redundant to 7.1.3.3.
196.	S7.1.5.2.6, 1 st para, 1 st sent	Deleted “has no safety-related function and it” due to redundancy.
197.	S7.1.5.2.6, 1 st para, last sent	Inserted “qualified safety-related isolation devices via datalinks and” for consistency with Subsection 7.1.3.3
198.	S7.1.5.2.6, 6 th para, last sent	Replaced “synchronization” with “tagging” because the divisions of Q-DCIS operate asynchronously and are not synchronized with the operation of the N-DCIS.
199.	S7.1.5.3, 4 th para, 1 st sent	Deleted “, in accordance with the SRP” since there are exceptions in Table 7.1-1 to the SRP.
200.	S7.1.5.3, 5 th para	Sentence reworded to better describe Subsection 7.1.6.
201.	S7.1.5.3.1, 1 st bullet	Replaced “The N-DCIS is nonsafety-related and conforms so that there are no unresolved issues for the N-DCIS.” with “The N-DCIS is nonsafety-related. Resolution of unresolved and generic safety issues is discussed in Section 1.11.” for consistency with other safety evaluation sections.
202.	S7.1.5.3.3, 1 st bullet, 2 nd para	Revised conformance statement for Item II.Q as committed in Response to RAI 7.1-70 via MFN 08-116.
203.	S7.1.5.3.5	Replaced “ISO 17799 for Security Management of ” with “References 7.1-8, 7.1-10, and 7.1-12 for” since references more accurately describe conformance.
204.	S7.1.5.3.5	Changed conformance statement to BTP HICB-16 for consistency with other chapter 7 conformance statements.
205.	S7.1.5.4.	Entire subsection revised as committed in Response to RAI 16.2-145 via MFN 08-372.
206.	S7.1.5.6, 1 st para, 2 nd sent	Replaced “isolation devices” with “safety-related isolation devices (CIMs)” for consistency with Subsection 7.1.3.3.
207.	S7.1.5.6 1 st para, 3 rd sent	Replaced “devices/gateways/datalinks” with “devices, datalinks, and gateways (when necessary)” for consistency with Subsection 7.1.3.3.

208.	S7.1.5.6 1 st para 21 st bullet (Rev 4)	Deleted “Flammability Control System” as it is no longer technically correct.
209.	S7.1.5.6 1 st para 34 th bullet (Rev 4)	Deleted “I&C Power Supply system” as it is no longer technically correct.
210.	S7.1.5.6 1 st para 50 th bullet	Response to RAI 6.2-102 S01 transmitted via MFN 06-466 Supplement 1 deleted “Passive Containment Cooling System (PCCS)”. Design change adding PCCS vent fan requires that “PCCS” is reinstated in the list. Therefore the net change is only editorial.
211.	S7.1.5.6 1 st para 51 st bullet	Inserted PRMS for completeness.
212.	S7.1.5.6 1 st para 59 th bullet (Rev 4)	Deleted “RPMS” because it was an error and is not needed in the list.
213.	S7.1.6.1, 2 nd bullet	<ul style="list-style-type: none"> • Updated text for 10 CFR 50.34(f) conformance statement in accordance with the response to RAI 7.2-4 S01 transmitted via MFN-06-146 Supplement 1. • Deleted “Chapter 1,” as it is indicated by the “1” in “Appendix 1A”.
214.	S7.1.6.1, 3 rd bullet	Added “10 CFR 50.34(f)(2)(iv) [I.D.2], Safety parameter display system” as committed in Response to RAI 7.2-4 S01 transmitted via MFN 06-146 Supplement 1. Note: Added “(see Subsection 7.1.5.2.4.1)” which was not committed in MFN 06-146 for clarity.
215.	S7.1.6.1, 9 th bullet	Added “10 CFR 50.34(f)(2)(xxiii) [II.K.2.10], Anticipatory Reactor Trip” as committed in Response to RAI 7.1-71 via MFN 08-280.
216.	S7.1.6.1, 4 th para	Added title to 10 CFR 50.62 for consistency.
217.	S7.1.6.1, last para	Inserted 10 CFR 50.49 with conformance statement for consistency with Subsection 7.1.6.6.1.5
218.	S7.1.6.3, Item II.Q	Inserted “in Digital Instrumentation and Control Systems” to correct the Memo title
219.	S7.1.6.4, 6 th para (RG 1.62)	<ul style="list-style-type: none"> • Added last 3 sentences previously located in 7.1.6.6.1.18 since exceptions to RGs are better discussed in this section. • Replaced “a low reactor pressure interlock” with “DPS logic” to reflect the current/latest DPS design.
220.	S7.1.6.4, 7 th para (RG 1.75)	Consolidated the two sentences to present information in a more concise manor.

221.	S7.1.6.4, 8 th para (RG 1.89)	Inserted “RG 1.89, Environmental Qualification of Certain Electronic Equipment Important to Safety for Nuclear Power Plants. The safety-related system design conforms to RG 1.189.” consistent with the intent of RAI 7.1-47 (MFN 07-430).
222.	S7.1.6.4, 10 th para (RG 1.100)	Inserted RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5
223.	S7.1.6.4 (RG 1.151)	<ul style="list-style-type: none"> • Inserted “trip” to 4th sentence to better describe Scram requirements. • Replaced “an event” with “DBE” in 7th sentence for clarity. • Replaced “prevent” with “provide” in 7th sentence to more accurately describe the design. • Added last sentence in accordance with NRC Generic Letter 2008-01
224.	S7.1.6.4 (RG 1.152), 1 st para	Replaced “Criteria and guidelines” with “The guidelines” for clarity.
225.	S7.1.6.4 (RG 1.180), 2 nd para	Inserted “including methods of evaluating EMI operating envelopes,” as committed in Response to RAI 7.1-72 via MFN 08-250.
226.	S7.1.6.4 (RG 1.204)	Reworded final sentence for increased readability
227.	S7.1.6.4 (RG 1.209)	Inserted “RG 1.209, Guidelines For Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants. The safety-related system design conforms to RG 1.209.” consistent with the intent of RAI 7.1-47 (MFN 07-430).
228.	S7.1.6.5 (BTP 1)	Replaced “For details of compliance with BTP HICB-1 see Subsection 7.3.1.2.3.5’ with “The GDCS and interlock systems conform to BTP HICB-1’ for consistency with other conformance statements.
229.	S7.1.6.5 (BTP 16), 1 st para	Replaced “BTP HICB-16 is applicable to all sections of the Design Control Document” with “BTP HICB-16 is applicable to all sections of Chapter 7 of the Design Control Document and all sections conform to it” to limit the scope to Chapter 7 and to clarify conformance.
230.	S7.1.6.6, 2 nd para	Replaced “Some IEEE standards applicable to the I&C equipment are addressed in other chapters in accordance with the SRP format. These are identified as follows:” with “In accordance with the SRP format, the following IEEE standards applicable to the I&C equipment are addressed in other chapters.” to remove ambiguity.

231.	S7.1.6.6, 3 rd para	Inserted “series” to better describe IEC 61000-4 for accuracy.
232.	S7.1.6.6.1, 5 th sent	Replaced “includes the RPS, NMS, and SSLC/ESF” with “includes the equipment in the RTIF, NMS, and SSLC/ESF cabinets” for accuracy.
233.	S7.1.6.6.1.1, 1 st & 2 nd bullet	Demoted “Suppression Pool Temperature Monitoring (Subsection 7.2.3)” from the second bullet to the to 3 rd dash under “Reactor Trip System:” for accuracy.
234.	S7.1.6.6.1.1, 2 nd bullet	Added “SSLC/”to “ESF” and added reference information “(Subsection 7.3.5)” for completeness.
235.	S7.1.6.6.1.1, 2 nd bullet	Demoted ADS and GDSCS to part of the ECCS for correctness.
236.	S7.1.6.6.1.1, 2 nd bullet, first dash	<ul style="list-style-type: none"> • Included ICS system with references under ECCS for completeness. • Replaced “PCCS (Subsection 7.3.2),” with “SLC system (Subsection 7.4.1)” for correctness.
237.	S7.1.6.6.1.1, 3 rd bullets	Inserted “PCCS (Subsection 7.3.2),” as a first level item for consistency with Section 7.3.
238.	S7.1.6.6.1.1, 4 th & 5 th bullets	Promoted LD&IS and CRHS for correctness.
239.	S7.1.6.6.1.1, 4 th bullet	Added “non-MSIV functions” and “(MSIV functions of the LD&IS are located in the RTIF cabinets)” to better describe LD&IS
240.	S7.1.6.6.1.1, 4 th bullet (Rev 4)	Deleted “SSLC/ESF (Subsection 7.3.5)” and “SLC (Subsection 7.4.1)” to fix misplacement.
241.	S7.1.6.6.1.1, 8 th bullet	Replaced “ICS (Subsection 7.4.4)” with “PAM system (Subsection 7.5.1)” to correct the list.
242.	S7.1.6.6.1.1, 10 th –13 th bullets	Inserted bullets for PRMS, ATWS/SLC, CRHS and Vacuum breaker isolation function to make the list more complete.
243.	S7.1.6.6.1.1, last bullet (Rev 4)	Deleted “Interlock Systems (Section 7.6) because it is now nonsafety-related.
244.	S7.1.6.6.1.2, 1 st para, 2 nd sent	Replaced “RPS logic controller (reactor and SSLC/ESF)” with “RPS, NMS, and SSLC/ESF” as committed in Response to RAI 16.2-135 via MFN 08-372.
245.	S7.1.6.6.1.2, 2 nd para	Added reference to 7.1.3.3 to lead to more information.
246.	S7.1.6.6.1.2, 3 rd para, 3 rd sent	Replaced “logic controller” with “logic” as committed in Response to RAI 16.2-135 via MFN 08-372.

247.	S7.1.6.6.1.2, 4 th para, 3 rd sent	Replaced “logic controller” with “logic” as committed in Response to RAI 16.2-135 via MFN 08-372.
248.	S7.1.6.6.1.2, 4 th para, 4 th sent	Inserted “trip” for clarity.
249.	S7.1.6.6.1.2, last sent	Replaced “In addition, the platform specific LTRs for the safety-related system architectures” with In addition, the NUMAC and TRICON platform specific LTRs (References 7.2-2 and 7.3-5, respectively)” to account for the existence of vacuum breaker isolation function architecture.
250.	S7.1.6.6.1.3, 3 rd sent	Replaced “is required to return the safety-related systems to normal” with “is required to reset the safety-related systems” for clarity.
251.	S7.1.6.6.1.3, last sent	Inserted “, 4.6.1, 4.6.2” to act as a better guide.
252.	S7.1.6.6.1.5, 1 st para, 4 th sent	Replaced “The qualification is established using methods set forth in “General Electric Environmental Qualification Program”, NEDE-24326-1-P (Reference 7.1-2)” with “Equipment qualification is discussed in Section 3.11” consistent with the intent of RAI 14.3-206 via MFN 08-086 Supp 42.
253.	S7.1.6.6.1.6 2 nd para, 4 th sent	Replaced “signal” with “trip signal” for clarity.
254.	S7.1.6.6.1.6 2 nd para, 5 th sent	Replaced “Failure” with “Single failures” and added “and complete failures of hardware and software do not inhibit manual initiation of reactor scram, MSIV closure or SLC injection’ for clarity.
255.	S7.1.6.6.1.7 1 st para, 1 st sent	Replaced “independence requirements address the” with “required” to clarify the sentence.
256.	S7.1.6.6.1.7 2 nd para, last sent	Deleted “, such as qualified CIMs and fiber optic cables” to preclude the possible implication that fiber optic cable is the isolation device and for consistency with Subsection 7.1.3.3.
257.	S7.1.6.6.1.7 4 th para, 1 st sent	Reworded first sentence to preclude the possible implication that fiber optic cable is the isolation device and for consistency with Subsection 7.1.3.3.4.
258.	S7.1.6.6.1.7 4 th para, 2 nd sent	Added “of time tagging and NMS calibration data. Additional discussion on this subject is included in Subsection 7.1.3.3’ for clarity.

259.	S7.1.6.6.1.7 4 th para, 3-4 th sent (Rev 4)	Moved “LPRM calibration gain adjustment factors, which are calculated in the nonsafety-related plant computer function of the N-DCIS, are transmitted to the safety-related LPRM/APRM equipment using proper signal isolation. However, this data transmission can only be implemented and accepted by the safety-related equipment with the operator’s acknowledgment for further detail on this communication and transmission of time synchronization signals see subsection 7.1.3.3.” to Subsection 7.1.3.3 to consolidate similar information.
260.	S7.1.6.6.1.8, 1 st para, 3 rd sent	Replaced “when it is not practical to perform a test during power operation without the bypasses” with “to enable testing during power operation” to use language consistent with RG 1.22 and IEEE Std. 603, Sections 5.7 and 6.5.
261.	S7.1.6.6.1.8, 2 nd and 3 rd para	Inserted text in accordance with the response to RAI 7.1-44 transmitted via MFN-07-505.
262.	S7.1.6.6.1.9, 2 nd para (Rev 4)	Deleted this paragraph because it had excessive detail for Section 7.1 and it was misleading.
263.	S7.1.6.6.1.9, 2 nd para, 6 th & 7 th sent	Replaced “Other than the post-accident safety-related display, the system status information is not safety-related” with “All information available within a division, including post accident monitoring information, may be viewed in a safety-related manner on the VDUs associated with that division. The same divisional information and all nonsafety-related information may be viewed on the nonsafety-related VDUs and WDP.” for clarity.
264.	S7.1.6.6.1.9, 3 rd para, 1 st sent	Consolidated 1 st 2 sentences (Rev 4) into 1 st sentence to increase clarity.
265.	S7.1.6.6.1.9, 4 th para, 2 nd sent	Deleted “(man-machine interface)” as redundant.
266.	S7.1.6.6.1.9, 4 th para, last sent	Deleted “and its associated references” as no value added.
267.	S7.1.6.6.1.10, 1 st sent (Rev 4)	Deleted sentence “There are several ways to implement access control to plant I&C equipment, particularly safety-related systems.” due to no value added.
268.	S7.1.6.6.1.10, 1 st para, last sent	Replaced “Software of safety-related systems is normally not changeable” with “Safety-related software is not routinely changed” for clarity and to better describe the design.
269.	S7.1.6.6.1.10, 2 nd para, 1 st sent	Replaced “The safety-related and nonsafety-related DCIS cabinets have alarms in the MCR indicating that a cabinet door is open” with “An open DCIS cabinet door produces an alarm in the MCR” for clarity.

270.	S7.1.6.6.1.11	<ul style="list-style-type: none"> Replaced “amended from two-out-of-four to two out of three” to “two-out-of-three so that” for increased readability. Replaced “systems support dual divisional failures and provide all safety-related functions” with “system performs its safety-related functions with three out of four divisions available, in the presence of a single failure” in last sentence for consistency with Subsection 7.1.2.3.
271.	S7.1.6.6.1.12	Added “Section” in subsection heading for consistency.
272.	S7.1.6.6.1.12, 3 rd sent	Replaced “Safety-related system equipment is distinctly identified for each redundant portion of a safety-related system with identifying markings” with “Safety-related equipment is distinctly marked in each redundant division of a safety-related system” for clarity.
273.	S7.1.6.6.1.13	Added “Section” in subsection heading for consistency.
274.	S7.1.6.6.1.13, 1 st sent	First sentence rearranged for increased clarity.
275.	S7.1.6.6.1.13, 1 st para, 2 nd sent	Deleted “, and by four divisions of instrument power supplies” as it is no longer technically correct.
276.	S7.1.6.6.1.13, 2 nd para	<ul style="list-style-type: none"> Deleted “in all buildings” from 2nd sentence as redundant. Replaced “power active HVAC is not available to the safety-related CB or RB equipment, except in the MCR habitability area” with “power condition, active HVAC is not available to the safety-related CB or RB equipment, except in the CRHA” in 4th sentence for clarity and to use correct terminology. Replaced “MCR area” with “CRHA” to use correct terminology. Added “including the use of room coolers powered by the ancillary diesel generators” and additional references to last sentence to support the use of room coolers.
277.	S7.1.6.6.1.13, 3 rd para (Rev 4)	Deleted “Other auxiliary features that support the Q-DCIS functions prevent” and “from degrading below” and moved “the safety-related system” and “an acceptable level.” to 1 st paragraph for readability.
278.	S7.1.6.6.1.14	<ul style="list-style-type: none"> Consolidated first two sentences for increased clarity. Inserted text “The operation or failure of shared N-DCIS components does not affect the performance of the Q-DCIS.” as committed in Response to RAI 7.1-73 via MFN 08-280.

279.	S7.1.6.6.1.15,	Replaced “The overall design and implementation process is described in Chapter 18.” in 2 nd sentence (Rev 4) with “and is described in Chapter 18” in last sentence for increased readability.
280.	S7.1.6.6.1.17, 1 st para	<ul style="list-style-type: none"> Replaced “The RPS and SSLC/ESF logic automatically initiates reactor scram trip and actuates” with “The RTIF and NMS, logic automatically initiates reactor trip and the SSLC/ESF logic automatically actuates “ in 1st sentence for clarity. Replaced “the scram and ESF actuation setpoint” with “their actuation setpoint” in 2nd sentence for clarity.
281.	S7.1.6.6.1.17, 2 nd para	<ul style="list-style-type: none"> Revised first two sentence as committed in Responses to RAI 16.2-146 & 16.2-149 transmitted via MFN-07-536 (with minor editorial changes) and to be more in line with GEH setpoint methodology. Added “application software, hardware processing rates, and” to last sentence for greater clarity.
282.	S7.1.6.6.1.18, 3 rd para, 2 nd sent	Added “manual’ to better describe reactor trip.
283.	S7.1.6.6.1.18, 5 th para	<ul style="list-style-type: none"> Replaced “scram switches, and the ATWS DPS” with “scram switches share no equipment with the automatic controls and require no software for their operation, and the DPS” to better reflect the design as indicated in Sections 7.2 and 7.8. Replaced “ATWS DPS manual scram switches are directly connected to” with “DPS manual scram switches directly control” in 3rd sentence for accuracy. Last 2 sentences (Rev 4) were moved to Subsection 7.1.6.4 since exceptions to RGs are more appropriate in that subsection.
284.	S7.1.6.6.1.18, last para	<ul style="list-style-type: none"> Deleted “and its associated references” to 2nd sentence as unneeded. Added “7.2.2” to last sentence in order to complete reference to appropriate subsections.
285.	S7.1.6.6.1.19, 1 st para, 1 st sent	Added “, in accordance with GDC 24” for completeness. This concept was moved from the 2 nd paragraph for readability
286.	S7.1.6.6.1.19, 1 st para, 6 th sent	Deleted “The protection system does not rely on communication from the nonsafety-related channels” as a redundant statement.
287.	S7.1.6.6.1.19, 1 st para, last sent	Inserted “For further detail on communication between the Q-DCIS and the N-DCIS (including transmission of time tagging signals) see Subsection 7.1.3.3” for clarity.

288.	S7.1.6.6.1.19, 2 nd para, 3 rd sent (Rev 4)	Deleted “The Q-DCIS meets the requirements of GDC 24” as redundant to Subsection 7.1.6.2.
289.	S7.1.6.6.1.19, 2 nd para, 3 rd sent	Replaced “the Q-DCIS (RPS and SSLC/ESF)” with “the RTIF, NMS, and SSLC/ESF” to more accurately represent the design.
290.	S7.1.6.6.1.19, 3 rd para (Rev 4)	Paragraph deleted as repetitive.
291.	S7.1.6.6.1.21	Revised 4 th sentence for clarity and conciseness.
292.	S7.1.6.6.1.24, 1 st sent	Updated text in accordance with the responses to RAI 16.2-146 & 16.2-149 transmitted via MFN-07-536
293.	S7.1.6.6.1.24, 2 nd sent	Moved reference to Chapter 15 for readability.
294.	S7.1.6.6.1.26, 1 st para, last sent	Inserted the word “hydraulic” to better describe the pressure.
295.	S7.1.6.6.1.27, 7 th sent	Replaced “An without powered division” with “The condition of a division without power” for readability.
296.	S7.1.8	Replaced Reference 7.1-1 “USNRC, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,” NUREG-0800.” with “(Deleted)” as the reference is not necessary.
297.	S7.1.8	Replaced Reference 7.1-2 “General Electric Company, “General Electric Environmental Qualification Program,” NEDE-24326-1-P, Revision 1, Class III (Proprietary), January 1983” with “(Deleted)” since the reference is no longer called out in the text.
298.	S7.1.8	Updated date and revision number in reference 7.1-4 based on LTR (NEDO-33251 R01) transmitted via MFN-07-475.
299.	S7.1.8	Corrected references 7.1-9 and 7.1-11 in accordance with the responses to RAI 16.2-146 & 16.2-149 transmitted via MFN-07-536.

300.	T7.1-1	<p>Updated table according to</p> <ul style="list-style-type: none"> • Response to RAI 7.1-66 via MFN 08-385 (BTP 10 for Q-DCIS), • Response to RAI 6.3-63 via MFN 08-346 (VB isolation function column), • Response to RAI 7.1-71 via MFN 08-280 (50.34(f)(2) xxiii [II.K.2.10] row), • NRC Generic Letter 2008-01 (RG 1.151) • Response to RAI 7.1-47 via MFN 07-430 (RG 1.89 & 1.209 rows), • Response to RAI 11.5-49 via MFN 08-145 (RG 1.97 & BTP 10 for PRMS), • Response to RAI 12.4-25 via MFN 08-466 (BTP 10 for ARMS), • Changes of the interlock system classification from a safety-related to nonsafety-related system (Interlock Systems column), and • Need for consistency with Safety Evaluation subsections (many). • Deleted note “[†]Interlocks are embedded within system logic” since table items do not refer to embedded logics.
301.	T7.1-2	<ul style="list-style-type: none"> • Deleted “(that is, ADS, GDCS, ICS, SLC)” in 2nd row, 5th column and replaced “resides within the NBS, ref. 7.3.1.1.2” with “comprises the ADS, GDCS, ICS, and SLC, ref. 7.3.1” in note 4 to consolidate ideas and remove the idea that the SSLC/ESF resides within the NBS which is incorrect. • Table updated to reflect the removal/addition of references to IEEE Std. 603 throughout the Chapter 7 text including those committed in Response to RAI 6.3-63 via MFN 08-346.
302.	F7.1-1	Modified to indicate components of RTIF cabinets, and accommodate addition of vacuum breaker isolation function.
303.	F7.1-2	Modified to accommodate addition of vacuum breaker isolation function.
304.	F7.1-3	Modified to accommodate addition of vacuum breaker isolation function.

305.	F7.1-4	<p>Modified Figure to</p> <ul style="list-style-type: none">• Indicate components of RTIF cabinets,• Add “VBIF” for consistency with Section 7.3.6,• Add detail to the Note for clarity.• As committed in phone communication to the NRC on April 3rd, 2008, and• As committed in Response to RAI 7.1-67 via MFN 08-207.
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TIER 2 SECTION 7.2 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.2, Various	Changed “channel” to “division” for consistency with the rest of Chapter 7.
2.	S7.2.1.1, 5 th bullet	Inserted “manual” for clarity.
3.	S7.2.1.1, 6 th bullet	Added “reactor” for clarity.
4.	S7.2.1.1 last para, 2 nd bullet	Changed “essential” to “safety-related” to replace outdated terminology.
5.	S7.2.1.1 last para, 4 th bullet	Added “manual” for clarity.
6.	S7.2.1.1 last para, 5 th bullet	Changed “A Mode selection switch” to “A Reactor Mode Switch” for clarity.
7.	S7.2.1.2.1 1 st para, 2 nd sent	Deleted “(redundant)” as unnecessary.
8.	S7.2.1.2.1 3 rd para	Replaced “both ECCS logic and the DPS” with “their counterparts on the SSLC/ESF and the DPS platforms” to increase clarity of design.
9.	S7.2.1.2.4 1 st para	<ul style="list-style-type: none"> • Inserted “AC” in second sentence to better describe divisional power. • Deleted “into the design. The RPS design satisfies the single-failure criterion requirement of” to in forth sentence make less wordy and improve consistency when describing IEEE 603.
10.	S7.2.1.2.4.1 1 st and 2 nd para	Changed paragraph breaks for clarity.
11.	S7.2.1.2.4.1 Sensor Channels 1 st para	Replaced “monitor for” with “detect” in 2 nd sentence and inserted the word “conversion” after “analog to digital” in the 3 rd sentence for clarity.

12.	S7.2.1.2.4.1 Sensor Channels 2 nd para, 2 nd sent	Replaced “channels” with “sensors” for accuracy.
13.	S7.2.1.2.4.1 Sensor Channels 3 rd para	Reworded 3 rd sentence for increased accuracy.
14.	S7.2.1.2.4.1 Sensor Channels 5 th para	Revised the entire paragraph to more clearly describe safety-related isolation and the use of datalinks and gateways and referring to subsection 7.1.3.3 for additional detail. The NUMAC LTR (Reference 7.2-2) is more appropriately addressed in subsection 7.2.2.1.
15.	S7.2.1.2.4.1 Divisions of trip logic, 2 nd para, 4 th sent	Replaced “electronically” with “optically” for accuracy.
16.	S7.2.1.2.4.1 Divisions of trip actuators	Revised text under this heading as committed in response to RAI 16.2-135 via MFN 08-372 to better differentiate between primary and backup scram and to replace “controllers” with “load drivers”.
17.	S7.2.1.2.4.1 Division of Scram Logic Circuitry	Removed text “functional block diagram showing the RPS” and “diagram” from last sentence as redundant.
18.	S7.2.1.2.4.2, 1 st para	<ul style="list-style-type: none"> • Added “pressure vessel (RPV)” to 6th bullet for clarity. • Added bullet for “High Feedwater temperature biased simulated thermal power (NBS and NMS),” as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD). • Added bullet for “Feedwater temperature exceeding allowable simulated thermal power vs. FW temperature domain” consistent with the intent of Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for clarity and consistency with DCD).
19.	S7.2.1.2.4.2 SRNM Trip Signals 1 st para	Added “safety-related” to 1 st sentence for clarity.
20.	S7.2.1.2.4.2 SRNM Trip Signals 2 nd para	Added “SRNM trip signals are summarized in Table 7.2-3.” as new 3 rd sentence for clarity.

21.	S7.2.1.2.4.2 APRM Trip Signals 1 st para	Removed reference to RPS in first sentence as redundant.
22.	S7.2.1.2.4.2 APRM Trip Signals 3 rd para	Added “safety-related” to the first sentence for clarity.
23.	S7.2.1.2.4.2 Nuclear Boiler System	Added paragraph entitled “Feedwater Temperature Biased Simulated Thermal Power:” as committed in response to RAI 4.3-12 via MFN 08-313. Note that last sentence was not committed in MFN 08-313 but is consistent with the intent of Response to RAI 4.3-12. Additionally, the phrase “and simulated thermal power (STP) from the NMS” was removed from the committed text since STP setpoint does not require STP from NMS to develop a STP setpoint.
24.	S7.2.1.2.4.2 Control Rod Drive System	Added “the reactor” to last sentence to clarify depressurization.
25.	S7.2.1.2.4.2 Loss of Power Gen..., 1 st para	In second sentence replaced “three buses’ Feedwater (FW) pumps can support” with “three of the four busses can support the necessary FW pumps required for” in 2 nd sentence for clarity.
26.	S7.2.1.2.4.2 Suppression Pool Temp, 1 st para, 2 nd sent	Replaced “temperature high to be enabled” with “temperature high signal to be considered valid” for clarity.
27.	S7.2.1.2.4.2 last para, last sent	Replaced “selected” with “any of the” to more accurately represent the design.
28.	S7.2.1.2.4.3 3 rd para, last sent	Added “Reactor” when describing the Reactor mode switch for clarity.
29.	S7.2.1.2.4.3 6 th para	<ul style="list-style-type: none"> Deleted “The drywell pressure output signals are sent to the LD&IS for RCPB and primary containment leakage alarm and isolation functions. The drywell pressure output signals are obtained from the RPS sensors (one for each division) and provided to the LD&IS via the Q-DCIS.” and added “to the LD&IS for RCPB isolation function.” to more accurately describe the design. Added “the Reactor Mode Switch is” to second sentence for clarity.
30.	S7.2.1.2.4.3 Displays, 1 st para	Added bullet for “FW temperature” as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).

31.	S7.2.1.2.4.3 Displays ,2 nd para, 1 st sent	Replaced “isolated gateways” with “the required safety-related isolation” to more clearly describe safety-related isolation.
32.	S7.2.1.2.4.3 Displays ,2 nd para, 2 nd sent	Reworded sentence for readability.
33.	S7.2.1.2.4.3 Alarms, 1 st para, 2 nd sent	Replaced “isolated gateways” with “the required safety-related isolation” to more clearly describe safety-related isolation.
34.	S7.2.1.2.4.3 Alarms, 2 nd para	<ul style="list-style-type: none"> • Added bullet for “FW temperature biased STP trip,” as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD). • Added bullet “FW temperature biased STP trip bypassed,” as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
35.	S7.2.1.2.4.3 Outputs to N- DCIS, 1 st sent	<ul style="list-style-type: none"> • Changed “loss” to “logs” to correct typing error. • Replaced “through isolated gateway connections from the RPS” to “from the RPS through the required safety-related isolation” to more clearly describe safety-related isolation.
36.	S7.2.1.2.4.3 Outputs to the ICS, last sent	Deleted “The RPS also provides the loss of power generation bus voltage signal (Loss of Feed Water Flow) for automatic initiation of the ICS” based on the design now requiring ICS to receive the loss of power generation bus voltage signal independently from RPS.
37.	S7.2.1.2.4.3 Uninterruptible AC Power Supply, 2 nd sent	Changed “vital AC power supplies” to “120 VAC UPS” for clarity.
38.	S7.2.1.2.4.4 1 st para, 1 st sent	Replaced “safety” with “safety-related” to use correct terminology.
39.	S7.2.1.2.4.4, 3 rd para	Deleted 1st sentence “The RPS has built-in redundancy in its design.” as redundant.
40.	S7.2.1.3.1, 4 th bullet	Added “10 CFR 50.34(f)(2)(xxiii)[II.K.2.10], Anticipatory Reactor Trip” with conformance statement as committed in Response to RAI 7.1-71 via MFN 08-280.

41.	S7.2.1.3.4	<ul style="list-style-type: none"> • Reworded conformance statement to RG 1.22 for clarity. • Combined first two paragraphs in conformance statement for RG 1.47. • Deleted “Nuclear Regulatory Commission (NRC)” describing RG 1.53 in conformance statement as no value added. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Reworded conformance statement to RG 1.105 as committed in Response to RAIs 16.2-146 and 16.2-149 submitted via MFN 07-536. • Expanded Title of RG 1.153 for completeness.
42.	S7.2.1.3.5	<ul style="list-style-type: none"> • Replaced “logic controllers use optical CIM” to “logics use safety-related fiber optic CIMs” in conformance statement to BTP HICB-11 as committed in Response to RAI 16.2-135 via MFN 08-372 and to more clearly describe safety-related isolation. • Replaced “isolated gateways” with “the required safety-related isolation” in conformance statement to BTP HICB-12 to more clearly describe safety-related isolation. • Replaced “safety” with “safety-related” in conformance statement to BTP HICB-14 to use correct terminology. • Replaced “controllers” with “logics” in conformance statement to BTP HICB-14 as committed in Response to RAI 16.2-135 via MFN 08-372. • Reworded conformance statement to BTP HICB-16 for consistency. • Replaced “controllers” with “logics” in conformance statement to BTP HICB-17 as committed in Response to RAI 16.2-135 via MFN 08-372. • Reworded conformance statement to BTP HICB-18 as committed in Response to RAI 7.2-50 via MFN 07-402. • Replaced “controller(s)” with “logic(s)” in BTP HICB-11, 14, 17, and 21 as committed in Response to RAI 16.2-135 via MFN 08-372.
43.	S7.2.1.3.6	<ul style="list-style-type: none"> • Added “and 10 CFR 50.34(f)(2)(xxiii)[II.K.2.10]” for consistency with Subsection 7.2.1.3.1. • Deleted “of Tier 2, Chapter 1,” for no value added.

44.	S7.2.1.4.1	Inserted new text after 3 rd paragraph as committed in the response to RAI 7.1-44 in MFN 07-505.
45.	S7.2.1.4.2	<ul style="list-style-type: none"> • Replaced “Inspection” with “Testing” in the heading and • Deleted heading “Surveillance Testing” from 7.2.1.4.3 (Rev 4) to combine similar ideas and better describe the subsection.
46.	S7.2.1.4.2, 2 nd para, last sent	Revised sentence for increased accuracy.
47.	S7.2.1.5.2.1, 2 nd para, 1 st bullet, 2 nd para, 2 nd sent	Replaced “as indicated by their 10% position sensors within a preset time delay after the initiation of the reactor trip signal caused by the TCV fast closure or TSV closure to inhibit reactor trip” with “This bypass occurs if a sufficient number of TBVs open to at least 10% within a preset time limit following the TCV fast closure or TSV closure signal to inhibit reactor trip” for clarity.
48.	S7.2.1.5.2.1, 2 nd para, 3 rd bullet, 2 nd para, 2 nd sent	Inserted “manual” to more clearly describe a bypass switch.
49.	S7.2.1.5.2.2, 2 nd para	Removed the term “channel” and “scram trip” throughout paragraph to remove confusing terminology.
50.	S7.2.1.5.2.2, 2 nd para, 2 nd bullet, 1 st sent	Deleted “(redundant)” as unnecessary.
51.	S7.2.1.5.2.2, 2 nd para, 3 rd bullet	Replaced “one division of channel sensors may be bypassed (taken out of service at the sensor channels level) and, simultaneously, the same division or any other division may be taken out of service at the RPS trip system level” with “bypassing one division of sensors (taken out of service at the sensor channels level) and, simultaneously removing from service the same division or any other division at the RPS trip system level is allowed” for increased accuracy.
52.	S7.2.1.5.9	Inserted “Position” into the subsection heading for clarity.
53.	S7.2.1.5.10	Removed the term “channel” from “channel-sensor maintenance bypass switches” to remove confusing terminology.
54.	S7.2.2.1, 3 rd para, 2 nd sent	Added “in Subsection 7.1.3.3 and” to act as a better guide.
55.	S7.2.2.1, 3 rd para, 4 th sent	Replaced “The CIM has uses a one-way fiber optic communication data link and provides electrical isolation” with “The CIM uses a one-way fiber optic communication data link and provides required safety-related isolation” to more clearly describe safety-related isolation.

56.	S7.2.2.1.1.3 2 nd para	<ul style="list-style-type: none"> Replaced “1 x 10³ neutrons/cm²/sec (nv) to 1x 10¹³ nv” with “1 × 10³ to 1 × 10¹³ neutrons/cm²/sec” in 2nd bullet to remove confusing symbol. Reworded 6th bullet for clarity.
57.	S7.2.2.1.4.2 1 st para	Added “neutron” to flux oscillation for clarity.
58.	S7.2.2.2.1	Changed “rod block” to “rod withdrawal block and feedwater temperature control valve one-way block functions “ as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
59.	7.2.2.2.2	Changed Subsection heading from “Neutron Flux Monitoring Ranges System Safety Classification” to “Neutron Monitoring Subsystem Safety Classification” to better describe the subsection.
60.	S7.2.2.2.4.1, 1 st sent	Changed "nv" to "neutrons/cm ² /sec" twice to remove confusing symbol.
61.	S7.2.2.2.4.2 2 nd para	Sentence reworded for clarity.
62.	S7.2.2.2.4.3 1 st para	Added “detector” for clarity.
63.	S7.2.2.2.4.3 3 rd para, 1 st sent	Added “neutron” for clarity.
64.	S7.2.2.2.4.4, 1 st para	Changed "nv" to "neutrons/cm ² /sec" four times to remove confusing symbol.
65.	S7.2.2.2.4.4, 2 nd para, 4 th sent	Added “thermal” for clarity.
66.	S7.2.2.2.4.5, 4 th sent	Added “functions” for clarity.
67.	S7.2.2.2.4.6, 1 st para, 2 nd sent	Replaced “controller” with “logic processor” as committed in Response to RAI 16.2-135 via MFN 08-372.
68.	S7.2.2.2.4.8, 1 st para	Added “environmental” for clarity.
69.	S7.2.2.2.4.8, 2 nd para	Deleted “Additional information on equipment qualification with respect to environmental considerations is provided in the GEH Environmental Qualification program (Reference 7.1-2)” to refer reader directly to Section 3.11 for EQ information.
70.	S7.2.2.2.5.3 2 nd para, 1 st sent	Replaced “detector” with “assembly” to better represent the design.

71.	S7.2.2.2.5.3 3 rd para, 3 rd sent	Added “reactor” to clarify coolant flow.
72.	S7.2.2.2.5.3 4 th para, 1 st sent	Removed “of the assembly” as redundant.
73.	S7.2.2.2.5.8, last sent (Rev 4)	Deleted “Additional information on equipment qualification with respect to environmental considerations is provided in the GEH Environmental Qualification program (Reference 7.1-2)” to refer reader directly to Sections 3.10 and 3.11 for EQ information.
74.	S7.2.2.2.6.5, last sent	Added “functions” for clarity.
75.	S7.2.2.2.6.6, 1st para, 1 st sent	Replaced “One APRM channel out of four channels may be bypassed” to “Bypass of one APRM channel out of four is allowed” for readability.
76.	S7.2.2.2.6.8, last sent (Rev 4)	Deleted “Additional information on equipment qualification with respect to environmental considerations is provided in the GEH Environmental Qualification program (Reference 7.1-2).” to refer reader directly to Sections 3.10 and 3.11 for EQ information.
77.	S7.2.2.2.7.1 1 st para, 3 rd sent	Added “thermal” to describe neutron flux for clarity.
78.	S7.2.2.2.7.2	Added “120 VAC” to better describe APRM power.
79.	S7.2.2.2.7.3	Replaced text and heading with “(Deleted)” since this subsection was redundant to S7.2.2.2.7.1.
80.	S7.2.2.2.7.7	Replaced “Considerations” with “Conditions” in subsection title and text for accuracy.
81.	S7.2.2.3.4, 4 th bullet	Reworded conformance statement for RG 1.75 for conformity and readability.
82.	S7.2.2.3.4	<ul style="list-style-type: none"> • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5.

83.	S7.2.2.3.5	<ul style="list-style-type: none"> • Replaced “optical CIMs” with “safety-related fiber optic CIMs” in conformance statement to BTP HICB-11 for accuracy. • Replaced “controllers” with “logics” in the conformance statement to BTP HICB-14 as committed in Response to RAI 16.2-135 via MFN 08-372. • Deleted “This BTP is applicable to all sections of the DCD.” from conformance statement to HICB-16 because this it goes beyond the scope of this subsection. • Replaced conformance statement for BTP HICB-18 as committed in Response to RAI 7.2-50 via MFN 07-402. • Replaced “diverse instrumentation and controls system as described in Section 7.8 as the DPS” with “DICS described in Section 7.8” in HICB-19 for brevity. • Corrected title of BTP HICB-21 for consistency.
84.	S7.2.2.4.2.1, 2 nd , and 3 rd sent	Added “when the reactor mode switch is not in “Run”” to 2 nd sentence and added 3 rd & 4 th sentence for clarity and consistency with the rest of Subsection 7.2.2.
85.	S7.2.3.2.2	Replaced “redundantly powered by the appropriate dual divisional uninterruptible 120 VAC power sources” with “powered by the appropriate dual divisional redundant 120 VAC UPS” for clarity
86.	S7.2.3.2.4, 1 st sent	Replaced “accident” with “DBA” for clarity.
87.	S7.2.3.3.1	Replaced “SPTM demonstrates compliance” with “The SPTM function complies” in 3rd bullet to add accuracy to the statement.
88.	S7.2.3.3.4	<ul style="list-style-type: none"> • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5.
89.	S7.2.3.3.6, 2 nd sent	Removed “Chapter 1,” as unnecessary information.
90.	S7.2.5	<ul style="list-style-type: none"> • Replaced text for Reference 7.2-1 as committed in Response to RAIs 16.2-146 & 16.2-149 via MFN 07-536. • Updated Reference 7.2-2 for correctness.

91.	T7.2-1	<ul style="list-style-type: none"> • Replaced “Channels” with “Sensors” in table title to use correct terminology. • Replaced “Channels” with “Sensors” in 1st column heading to use correct terminology. • Removed “of Channels” in 2nd column heading to use correct terminology. • Changed “NMS (APRM) 4” to “NMS (LPRM) 256” to accommodate the change from “channels” to “sensors”. • Changed the number of NMS (SRNM) sensors from 4 to 12 to accommodate the change from “channels” to “sensors”. • Replaced “Low charging pressure to control rod hydraulic unit accumulator” with “Charging pressure to control rod hydraulic unit accumulator” for consistency with other table items. • Replaced “TSV closure” with “TSV position switches” to use correct terminology. • Replaced “TCV fast closure” with “TCV hydraulic trip system oil pressure” to use correct terminology. • Added row for TBV position switches to better represent the design. • Replaced “Loss of Power Generation Bus” with Power generation bus voltage” to use correct terminology. • Replaced “High Condensate Pressure 4” with “Condenser pressure 12” for consistency with other table items to accommodate the change from “channels” to “sensors”. • Replaced “SPTM 4” with Suppression pool temperature 64” to use correct terminology and to accommodate the change from “channels” to “sensors”. • Added row for Feedwater temperature as committed in response to RAI 4.3-12 via MFN 08-313. • Deleted Note 1 as it is no longer applicable.
92.	T7.2-2, Rows 1, 2, 8, & 9	Revised Table and Notes to be consistent with DCD and SRNM design.
93.	Table 7.2-4	Replaced “120%” with “125%”for consistency with Section 15.2.
94.	F 7.2-2	Revised Figure as committed in response to RAI 4.3-12 via MFN 08-313.
95.	F 7.2-3	Revised how the exponents are shown on the Table axes. Changed "nv" to "neutrons/sqcm/sec". Editorial to conform with other DCD usage.
96.	Figure 7.2-8	Revised "gamma thermometer" to "AFIP". Editorial to conform with other DCD usage.

TIER 2 SECTION 7.3 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.3, Various	Replaced “keylock switch” with “disable switch” where appropriate to remove confusion over the term “keylock switch”.
2.	S7.3.1.1.2, 1 st para	Consolidated last two sentences (Rev 4) into one sentence for brevity.
3.	S7.3.1.1.2, 4 th para	Combined first two sentences (Rev 4) into one sentence for brevity.
4.	S7.3.1.1.2, 9 th para	Added “GDCS and” to better describe Figure 7.3-1b
5.	S7.3.1.1.2, 10 th para, 3 rd sent	Added “Only one division at a time can be bypassed, and used to facilitate either maintenance or calibration activities. Divisional bypasses are alarmed in the MCR.” to replace “The design allows only one division at a time to be bypassed, and can be used to facilitate either maintenance or calibration activities. Divisional bypasses are alarmed in the MCR.” from the 11 th paragraph (Rev 4)” to consolidate similar ideas and for readability.
6.	S7.3.1.1.2, 11 th para (Rev 4)	This paragraph was deleted and ideas/sentences were moved to previous and following paragraphs as described above and below.
7.	S7.3.1.1.2, 11 th para, 4 th sent	Added “The four divisional water levels and their trip setpoints are continuously monitored for consistency by the N-DCIS plant computer functions (PCF). An inconsistency results in an alarm.” which was located in the preceding paragraph (deleted) in Rev 4 for readability and corrected “(CPF)” to “(PCF)”.
8.	S7.3.1.1.2, 12 th para, 4 th sent	<ul style="list-style-type: none"> • Replaced “SSLC” with “SSLC/ESF” to use correct terminology. • Replaced “Subsection 7.3.5” with “Subsection 7.4.4” to correct the reference.
9.	S7.3.1.1.2, 13 th para, 2 nd sent	Added “Trip signals from” to clarify the ADS valve initiation.

10.	S7.3.1.1.2, 15 th para, 4 th sent	Replaced “since it may still be” with “because it maintains the ability to” for increased accuracy.
11.	S7.3.1.1.3.1, 2 nd bullet	Added “Separation and isolation are preserved both mechanically and electrically in accordance with IEEE Std. 603, Section 5.6 and RG 1.75. The ADS is divisionalized and designed with redundancy so failure of any instrument will not interfere with the system operation. Electrical separation is maintained between the redundant divisions.” for consistency.
12.	S7.3.1.1.3.4	<ul style="list-style-type: none"> • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Reworded conformance statement to RG 1.105 as committed in Response to RAIs 16.2-146 and 16.2-149 submitted via MFN 07-536. • Deleted “as described in Subsection 7.3.1.1.2” from conformance statement to RG 1.118 as an incorrect reference.
13.	S7.3.1.1.3.5	<ul style="list-style-type: none"> • Inserted “Conformance:” before every conformance statement. • Reworded conformance statement for HICB 16 for consistency.
14.	S7.3.1.1.3.6	Inserted this subsection for consistency with other DCD subsections.
15.	S7.3.1.1.5, 1 st para	Inserted “RPV” in 7 th bullet for clarity.
16.	S7.3.1.1.5, 2 nd para, 1 st sent	Replaced “ADS instrumentation essential for system operation” with “Safety-related ADS instrumentation” to use correct terminology.
17.	S7.3.1.2.1, 5 th bullet	Replaced “No single control logic and instrumentation failure will inadvertently open” to “Prevent any single control logic and instrumentation failure from inadvertently opening” for consistency with other bullets.
18.	S7.3.1.2.1, 6 th bullet	<ul style="list-style-type: none"> • Replaced “Instrument indicating” with “Display” for consistency with other bullets. • Deleted “is displayed” for redundancy.

19.	S7.3.1.2.2, 1 st para	Inserted this paragraph to clarify organization of GDCS.
20.	S7.3.1.2.2, 2 nd para	Replaced “comprises” with “injection and equalization functions are implemented by” to clarify organization of GDCS.
21.	S7.3.1.2.2, 3 rd para	Replaced “significantly above the top of active fuel (TAF). The suppression pool is located within the drywell, with a water level a few meters” with “above the top of active fuel (TAF) and provide core cooling water by the force of gravity. The suppression pool is located within the drywell, with its equalization lines located” for clarity.
22.	S7.3.1.2.2, Automatic operation, 1 st para	Rewrote the paragraph to better describe GDCS initiation.
23.	S7.3.1.2.2, Automatic operation, 2 nd para, 1 st sent	Replaced “Following the initial start signal (opening the ADS and GDCS valves), after a time delay (Table 7.3-4), and” with “The initial start signal to open the GDCS equalization valves is also given after a time delay (Table 7.3-4).” to better describe GDCS initiation.
24.	S7.3.1.2.2, Automatic operation, 2 nd para, 3 rd sent	Added “(one bypass and one failure)” for clarity
25.	S7.3.1.2.2, Automatic operation, 2 nd para, last sent (Rev 4)	Deleted “It is also possible for the operator manually to initiate the equalizing valves, or to individually fire squib initiators independently by sending trip signals to the automatic logic.” since it doesn’t describe Automatic operation.
26.	S7.3.1.2.2, Manual operation, 1 st para	Moved 3 rd paragraph (Rev 4) to become 1 st paragraph of section for better presentation.
27.	S7.3.1.2.2, Manual operation, 2 nd para	Added “(primary)” and “(backup)” to clarify manual operating scheme.
28.	S7.3.1.2.2, Manual operation, 3 rd para, last sent	Added “(primary)” and “(backup)” to clarify manual operating scheme.

29.	S7.3.1.2.2, Actuation Logic 1 st para, 1 st sent	Replaced “ESF” with “SSLC/ESF” to use correct terminology.
30.	S7.3.1.2.2, Actuation Logic 4 th para, 2 nd sent	Replaced “two trains” with “three load drivers” to better explain the current design.
31.	S7.3.1.2.2, Actuation Logic 6 th para, 1 st sent	Replaced “in Subsection 7.3.1.1.2” with “above (Automatic Operation)” to act as a better guide.
32.	S7.3.1.2.2, Actuation Logic 11 th para,	Replaced “two” with “three” in 1 st sentence and “both” with “all of the” in 3 rd sentence to represent the current design.
33.	S7.3.1.2.2, Actuation Logic 13 th para, 2 nd sent	Replaced “(see Figure 7.3-1b)” with “(see Figures 7.3-1b and 7.3-1c)” for completeness.
34.	S7.3.1.2.2, Actuation Logic 13 th para, 3 rd sent	Replaced “ECCS” with “SSLC/ESF” for accuracy.
35.	S7.3.1.2.2, Actuation Logic 14 th para	Replaced “two” with “three” in first sentence and “both” with “all of the” in 3 rd sentence to represent the current design.
36.	S7.3.1.2.2, Deluge System, 1 st para	<ul style="list-style-type: none"> • Replaced “Deluge system” with “severe accident deluge (GDSCS subsystem)” to use correct terminology. • Replaced “two squib initiators (one for each train)” with “four squib initiators (each train has a manual and automatic initiator)” in 3rd sentence to better represent the design. • Replaced “Basemat-Internal Melt Arrest Coolability (BiMAC) system” with “Basemat-Internal Melt Arrest Coolability (BiMAC) deluge system” to use correct terminology
37.	S7.3.1.2.2, Deluge System, 2 nd para, 2 nd sent	<ul style="list-style-type: none"> • Replaced “The containment floor is divided into 30 equal area cells” with “The containment floor area is divided into 30 cells” for correctness. • Inserted “thermocouples” for clarity.
38.	S7.3.1.2.2, Deluge System, 4 th para, last sent	Inserted “valve” for clarity.

39.	S7.3.1.2.3, 1 st para, 2 nd sent	Replaced “ECCS (ADS and GDCS)” with “ADS and GDCS” for accuracy.
40.	S7.3.1.2.3, 3 rd para (Rev 4)	Relocated this paragraph to become the 7 th paragraph for better flow of text and reworded 1 st sentence from “The two temperature switches and the related contacts, are part of the deluge system, are” to “The two deluge system thermocouples and related contacts are” for clarity.
41.	S7.3.1.2.3, 8 th para (Rev 4)	Deleted “Two temperature switches per train and the related contacts are part of the deluge system and are safety-related only to prevent the inadvertent actuation of the deluge valves. No single failure within the deluge system control and monitoring equipment causes an inadvertent actuation of the deluge system (IEEE Std. 603, Section 5.1). This is to ensure against inadvertently draining the GDCS pools, and thereby preventing the injection and equalizing functions from performing their safety functions.” as redundant.
42.	S7.3.1.2.3.1	<ul style="list-style-type: none"> Deleted " as discussed in Subsection 7.1.6.4" from 2nd bullet in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. Removed “redundantly” for redundancy in 2nd bullet.
43.	S7.3.1.2.3.4	<ul style="list-style-type: none"> Reworded conformance statement for RG 1.47 for conformity and readability. Reworded conformance statement for RG 1.53 for conformity and readability. Reworded conformance statement for RG 1.75 for conformity and readability. Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. Added RG 1.151 with conformance statement in accordance with NRC Generic Letter 2008-01.
44.	S7.3.1.2.3.5	<ul style="list-style-type: none"> Inserted “Conformance:” before every conformance statement. Reworded conformance statement for BTP HICB-11 for conformity and readability.
45.	S7.3.1.2.3.6	Completely revised this subsection for consistency with other subsections.

46.	S7.3.1.2.5, 2 nd para, 1 st sent	Replaced “GDCS instrumentation that is essential for system operation” with “Safety-related GDCS instrumentation” to use correct terminology.
47.	S7.3.2	<ul style="list-style-type: none"> • Changed “heat exchanger loops” and “heat exchangers” to “condensers” and replaced “extension” with “integral part” as committed RAI 6.2-102 S01 in MFN 06-466. • Deleted “a pool of water” from 2nd sentence as redundant. • Replaced “A rise in containment (drywell) pressure above the pressure suppression pool (wetwell) pressure” with “Containment (drywell) pressure above the suppression pool (wetwell) pressure” for clarity and to remove redundancy. • Inserted “in the first 72 hours after a LOCA. For long-term effectiveness of the PCCS, the vent fans are manually initiated by operator action” as committed in Response to RAI 6.2-139 transmitted via MFN 08-357.
48.	S7.3.3	Added sentence “The non-safety monitoring functions of LD&IS are performed in the N-DCIS.” for clarity.
49.	S7.3.3.1, 1 st para, 1 st sent	Inserted “safety-related” to describe system design criteria.
50.	S7.3.3.1, 1 st para 2 nd bullet	Added text “MSIV functions of”, replaced “one LD&IS divisional logic channel” with “the logic of one LD&IS division”, and added “The containment isolation function of LD&IS logic design is fail as-is such that loss of power to the logic of one division does not result in a trip.” to clarify the function and added relevant detail.
51.	S7.3.3.2, 1 st para, 1 st sent	Deleted “, in certain cases,” to better represent the design.
52.	S7.3.3.2, 2 nd para	Moved 1 st bullet (Rev 4) to the list’s introductory sentence because it describes the other bullets and added “safety-related” to better describe the text to follow.
53.	S7.3.3.2, 3 rd para	<ul style="list-style-type: none"> • Rearranged the list introduction sentence and added “nonsafety-related” and “or indications” to better describe the information to follow. • Added last 6 bullets as being part of the nonsafety-related detected and monitored sources of leakage

54.	S7.3.3.3, 2 nd para	<ul style="list-style-type: none"> • Replaced “divisional channels of the LD&IS” to “divisions of the MSIV isolation function of the LD&IS” to use appropriate terminology. • Inserted sentence “The four redundant divisions of containment isolation function of the LD&IS uses fail as-is design and energized-to-trip logic.” to include necessary additional information.
55.	S7.3.3.3, 3 rd & 4 th para	Inserted these paragraphs as a result of feedwater isolation function design changes.
56.	S7.3.3.3, 5 th para, 2 nd sent	Replaced “closure” with “opening” to correct the description.
57.	S7.3.3.3, 5 th para, 4 th – 6 th sent	Added these sentences due to design changes in the feedwater line isolation signal.
58.	S7.3.3.3, 6 th para, last sent	Replaced “While in the Bypass mode, no other division of sensors simultaneously can be bypassed” with “With one division of sensors in the bypass mode, no other division of sensors simultaneously can be bypassed” to better describe N-2 design.
59.	S7.3.3.3, 8 th para, 2 nd sent	Replaced “the radiation detected in the LCW & HCW” with “high drywell pressure and low RPV water level” due to HCW/LCW PRMS drains safety class revision.
60.	S7.3.3.3.4	<ul style="list-style-type: none"> • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5.
61.	S7.3.3.3.5	<ul style="list-style-type: none"> • Inserted “Conformance:” before conformance statements for consistency. • Replaced “ADS” with “LD&IS” in conformance statement for BTP HICB-4 to correct a previous error.
62.	S7.3.3.3.6	<ul style="list-style-type: none"> • Added text “and 10 CFR 50.34(f)(2)(xxvi)(III.D.1.1)” as committed in RAI 7.2-4 S01 (MFN 06-146 S01) then deleted it as committed in Response to RAI 20.0-16 (MFN 08-324) therefore there is no resulting change to the DCD. • Deleted “to DCD Tier 2 Chapter 1” as unnecessary.
63.	S7.3.3.4.1, last word	Replaced “systems” with “platforms” to use correct terminology.

64.	S7.3.3.5, 1 st para, 2 nd sent	Replaced “SSLC/ESF system” with “RTIF and SSLC/ESF” to more accurately describe the design.
65.	S7.3.3.5, 2 nd para, 2 nd sent	Corrected the references to Section 5.2 tables.
66.	S7.3.3.5, 2 nd para, last sent	Added “The containment isolation function accomplished by valves and control signals required for the isolation of process lines penetrating the containment are summarized in Tables 6.2-15 through 6.2-42.” For consistency with Chapter 6.
67.	S7.3.4, 1 st para, 1 st sent	Replaced “ESF” with “SSLC/ESF” to use correct terminology.
68.	S7.3.4, 3 rd para, 2 nd sent	Replaced “9.5.1” with “9.5.1.11” to act as a better guide.
69.	S7.3.4.2	Subsection rewritten to better agree with DCD Subsections 6.4.4 and 9.4.1 and better describe current design of the Control Room Habitability Area HVAC Subsystem.
70.	S7.3.4.3.4	<ul style="list-style-type: none"> Deleted " as discussed in Subsection 7.1.6." throughout this subsection in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. Reworded conformance statement for RG 1.75 for conformity and readability. Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5.
71.	S7.3.4.3.5	Inserted “Conformance:” before conformance statements for consistency.
72.	S7.3.4.3.6	Deleted “to DCD Tier 2 Chapter 1” as unnecessary.
73.	S7.3.4.5	Replaced “following” with “abnormal” for clarity.
74.	S7.3.5	Corrected the name of the title.
75.	S7.3.5.1 1 st para, 1 st sent	Added (non-MSIV) for clarity.
76.	S7.3.5.1 2 nd para	<ul style="list-style-type: none"> Replaced “safety” with “safety-related” in 5th bullet to use correct terminology. Added “safety-related” to 7th bullet for clarity.
77.	S7.3.5.2, 3 rd sent	Added “, and the control room isolation function of the CRHS” since it is part of the SSLC/ESF.

78.	S7.3.5.2, last sent	<ul style="list-style-type: none"> Deleted “in Triconex Topical Report 7286-545-1-a, “Qualification Summary Report” for consistency with other sections. Added “and Reference 7.3-5” for completeness.
79.	S7.3.5.2.2, 1 st para, 2 nd sent	Removed “redundant” due to redundancy.
80.	S7.3.5.2.2, 4 th para, 7 th sent	Added “safety-related fiber optic” for consistency with Subsection 7.1.3.3.
81.	S7.3.5.2.2, 4 th para, 8 th sent	Replaced “fiber optic links” with “CIMS” for consistency with Subsection 7.1.3.3.
82.	S7.3.5.2.2, 5 th para	Changed “safety” to “safety-related” to use correct terminology.
83.	S7.3.5.2.2, 8 th para, 3 rd sent	Replaced The SSLC/ESF trip signal is transmitted via isolators (if required) and” with “The isolated SSLC/ESF trip signal is transmitted via” for clarity.
84.	S7.3.5.2.3, 3 rd sentence.	Replaced “joystick-type” with “four-position joystick-type” for clarity.
85.	S7.3.5.2.4, last sentence.	Replaced “The keylock switch that bypasses (disables)” with “the disable switch that bypasses” to remove confusion over the term “keylock switch”.
86.	S7.3.5.3, 4 th para	Inserted “spatially” to better describe division.
87.	S7.3.5.3, 7 th para	Removed “The RPS logic is implemented using a diverse vendor furnished microprocessor-based platform.” as redundant.
88.	S7.3.5.3.1	<ul style="list-style-type: none"> Deleted "7.1.6.4 and " in 2nd bullet in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. Added “Containment Isolation Systems” to Title of 10 CFR 50.34 (f)(2)(xiv) for completeness. Added “10 CFR 50.34(f)(2)(xxiii)[II.K.2.10], Anticipatory Reactor Trip” with conformance statement as committed in Response to RAI 7.1-71 via MFN 08-280. conformance statement has minor editorial changes to the text in MFN 08-280.

89.	S7.3.5.3.4	<ul style="list-style-type: none"> • Deleted ", as delineated in Subsection 7.1.6.4" throughout this subsection in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. • Reworded conformance statement for RG 1.47 for conformity and readability. • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Deleted "and IEEE Std. 7-4.3.2" in conformance statement for RG 1.152 for consistency with the rest of the section.
90.	S7.3.5.3.5	<ul style="list-style-type: none"> • Added "Conformance" to conformance statement of HICB-4 • Reworded conformance statement for HICB-8 for conformity and readability. • Replaced "Additional discussion is provided in Subsection 7.2.3.3.5" with "Setpoint implementation is in accordance with Reference 7.3-2" consistent with the intent of RAIs 16.2-146 & 16.2-149 via MFN 07-536. • Corrected reference in conformance statement of HICB-14. • Replaced" This BTP is applicable to all sections of the DCD. This subsection content" with "The level of detail in the SSLC/ESF subsection" in HICB-16 for consistency. • Revised conformance statement for HICB-18 as committed in Response to RAI 7.2-50 in MFN 07-402. • Received "The RPS logic is implemented using a diverse microprocessor-based platform" as described in the entry for S7.3.5.3, 7th para and replaced "addresses the requirements" with "addresses compliance with the guidance" in the conformance statement for HICB BTP-19 for consistency.
91.	S7.3.5.4, 2 nd para, 5 th sent	Replaced "safety" with "safety-related" to use correct terminology.
92.	S7.3.5.4, 3 rd para, 2 nd sent	Replaced "logged" with "recorded in a log maintained " for accuracy.
93.	S7.3.5.5, 3 rd	Inserted 3 rd paragraph as committed in response to RAI 7.1-48 in MFN 07-458.

94.	S7.3.5.5 4 th para, 1 st sent	Replaced “the equipment rooms in the CB, with key controls” with “the secure Q-DCIS equipment rooms in the CB, with controls for accuracy.
95.	S7.3.5.5 4 th para, 2 nd sent	Replaced “typically do not require operator action during plant operation or during accident or transient conditions, and mainly are used for test” with “are available for operator action during plant operation or during accident or transient conditions, and are also used to support testing” for accuracy.
96.	S7.3.5.5 4 th para, 4 th & 5 th sent	Added “The SSLC/ESF cabinets are accessible for maintenance and testing. Access to the SSLC/ESF cabinets is administratively controlled.” for clarity.
97.	S7.3.5.5 4 th para, 6 th & 7 th sent	These sentences are revised as committed in response to RAI 7.1-48 in MFN 07-458. Note: The text “However, conditions such as equipment failure, maintenance, or testing, may require the operator to gain access to an SSLC/ESF cabinet” which is present in MFN 07-458 is removed since its intent is covered by the 4 th & 5 th sentences of this paragraph.
98.	S7.3.5.5, last para	Rearranged sentence for increased readability.
99.	S7.3.6	Added this subsection as committed in Response to RAI 6.3-63 via MFN 08-346. Note: Section 7.3.6 is revised since the issuance of MFN 08-346. These revisions are described below.
100.	S7.3.6.2, 1 st bullet, 2 nd dash	Replaced "These components are independent of the Q-DCIS and other N-DCIS systems" with "These components are an independent Q-DCIS subsystem" to better describe the VBIF design as a Q-DCIS subsystem.
101.	S7.3.6.3, 2 nd para	Inserted this paragraph for conformance with other safety evaluation subsections.
102.	S7.3.6.3.3	Revised conformance statement for SRM on SECY-93-087, Item II.Q to clarify the discrete logic and solid state control design of the VBIF based on the information committed in Response to RAI 6.3-63 transmitted via MFN 08-346
103.	S7.3.6.3.4	<ul style="list-style-type: none"> Added RG 1.89 and 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5.

104.	S7.3.6.3.5	<ul style="list-style-type: none"> • Added BTP HICB-8 with conformance statement as necessary but not included in MFN 08-346 • Added “The discrete logic and solid state controls used in this design are not subject to the vulnerabilities described by BTP HICB-19.” to clarify the discrete logic and solid state control design of the VB isolation function based on the information committed in Response to RAI 6.3-63 transmitted via MFN 08-346
105.	S7.3.6.5, 2 nd para, 1 st sent	Replaced “that is essential for system operation is designed to operate in a drywell environment resulting from a LOCA” with “located in the drywell is designed to operate in the harsh drywell environment that results from a LOCA” to remove confusing terminology (essential) and define the environment as harsh.
106.	S7.3.7 (S7.3.6 Rev 4)	Revised Subsection numbering due to the addition of Subsection 7.3.6.
107.	S7.3.8 (S7.3.7 Rev 4)	<ul style="list-style-type: none"> • Revised Subsection numbering due to the addition of Subsection 7.3.6. • Revised Reference 7.3-2 as committed in MFN 07-536. • Added Reference 7.3-5 as committed in MFN 07-515.

108.	T7.3-5	<ul style="list-style-type: none"> • Replaced “MSL in Turbine Building (or alternate method)” with “MSL Turbine Area” in 3rd bullet to use correct terminology and because an alternate method is not used. • Added “RWCU/SDC rooms” as fourth bullet for completeness. • Replaced “Air” with “Vent” in 4th bullet under “Radiation levels” to use correct terminology. • Deleted bullets “Drywell Sump LCW Drain Line to Radwaste” and “Drywell Sump HCW Drain Line to Radwaste” under “Radiation Levels” heading due to HCW/LCW PRMS drains safety class revision. • Replaced “Exhaust” with “Discharge” in 5th bullet under “Radiation Levels” to use correct terminology. • Added “Steam” to 1st bullet under “Flow Rates” for clarity. • Deleted “Line” in 4th and 5th bullets under “Flow Rates” to use correct terminology. • Replaced “RPV Water Level 1 and Level 2” with “RPV Water Level 0.5, Level 1, Level 2, Level 8, and Level 9” to support design changes to feedwater line isolation valve. • Added “drain” to 2nd bullet under “Levels” and moved “and Containment Sump” to become a new bullet below to use correct terminology and for readability. • Added bullet for “Drywell Water” due to design changes in the feedwater line isolation signal.
109.	F 7.3-1a	Revised Figure to show disable switch and bypass indication.
110.	F 7.3-1b	Figure revised to add 3 rd series load drivers to improve reliability against inadvertent squib actuation and to change in terminology from “keylock switch” to “disable switch”.
111.	F 7.3-1c	Revised Figure for clarity.
112.	F 7.3-2	Revised Figure due to change in terminology from “keylock switch” to “disable switch”.
113.	F 7.3-3	<p>Figure revised to address:</p> <ul style="list-style-type: none"> • Changes in Feedwater isolation valve, • Feedwater ASD controller break trip, • HCW/LCW PRMS drains safety class revision, • High/Low conductivity waste PRMS Drains Safety Class Revision, • Design changes in the feedwater line isolation signal, and • Consistency with Table 7.3-5 and Subsection 5.2.5.

114.	F 7.3-5	Updated Figure to support design changes in the feedwater line isolation signal.
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TIER 2 SECTION 7.4 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.4, 4 th sent	Replaced “single protection against failure” with “protection against single failures” for clarity.
2.	S7.4.1.2, 5 th para	Replaced “boron dilution” with “reducing boron concentration” for readability.
3.	S7.4.1.2.1, 1 st sentence.	Replaced “electrical systems” with “Uninterruptible Power Supplies (UPS)” for increased accuracy.
4.	S7.4.1.2.2, 2 nd bullet, 1 st sent	Added “An open signal is provided to the normally open accumulator shut-off valves to support the ECCS injection function” for consistency with system description of ECCS initiation in 7.4.1.2
5.	S7.4.1.3, 1 st para, 2 nd sent	Replaced “safety” with “safety-related” to comply with proper nomenclature.
6.	S7.4.1.3, 2 nd para	Changes “are” to “transmits” for clarity.
7.	S7.4.1.3, 3 rd para, 6 th	Replaced “Series load drivers” with “Three load drivers in series for readability.
8.	S7.4.1.3, 3 rd para, 7 th sent	<ul style="list-style-type: none"> • Replaced “key-lock switches” with “disable switches” to remove confusing terminology. • Replaced “squib valve” with “squib valve initiator” for accuracy.
9.	S7.4.1.3, 6 th para,	Removed 2 nd sentence “Codes and Standards applicable to the SLC system are identified in Table 7.1-1 and discussed below.” as redundant.
10.	S7.4.1.3.1, 3 rd bullet	Deleted “, because the SLC is an ECCS” since the fact that the SLC is an ECCS does not affect it’s conformance.
11.	S7.4.1.3.1, 5 th bullet	<ul style="list-style-type: none"> • Deleted “along with the other I&C systems” to limit the scope of the conformance statement to the SLC system. • Replaced “Resolution of unresolved and generic safety issues is discussed in Section 1.11” with “Reference Section 1.11 for resolution of unresolved and generic safety issues” for clarity.

12.	S7.4.1.3.2	Added conformance statements to GDC 20, 21, 22 and 23 for consistency with Section 7.3 for ESF protection system requirements since SLC performs an ECCS function.
13.	S7.4.1.3.3	Added SRM conformance subsection and conformance statement for SECY 93-087, Item II.Q, as required for the SLC system.
14.	S7.4.1.3.4 (7.4.1.3.3 Rev 4)	<ul style="list-style-type: none"> • Changed subsection numbering as a result of the addition of the Staff Requirements Memorandum Subsection. • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Reworded conformance statement to RG 1.105 as committed in Response to RAIs 16.2-146 and 16.2-149 submitted via MFN 07-536. • Added conformance statements for Reg. Guides 1.152, 1.168, 1.169, 1.170, 1.171, 1.172 and 1.173 as they are applicable to the SLC system and to ensure a consistent treatment of all ESF protective functions. • Deleted “with the assumption that the interpretations and clarifications identified in Subsection 7.1.6.4 also apply to the system” from RGs 1.180 and 1.204 in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
15.	S7.4.1.3.5 (7.4.1.3.4 Rev 4)	<ul style="list-style-type: none"> • Changed subsection numbering as a result of the addition of the Staff Requirements Memorandum Subsection. • Reworded conformance statement for HICB-16 for conformity and readability. • Added conformance statements for BTPs HICB-14, HICB-17, HICB-18, HICB-19, and HICB-21 as they are applicable to the SLC system and to ensure a consistent treatment of all ESF protective functions.
16.	S7.4.1.4, 2 nd para, 1 st sent	Replaced “no longer possible after plant operation” with “not possible during plant operation” for clarity.
17.	S7.4.1.4, 2 nd para, last sent	Replaced “Testing of the shut-off valve isolation logic” with “Testing of the squib injection and accumulator shut-off valve logic” for consistency with Chapter 16.
18.	S7.4.1.5, 3 rd para, 2 nd sent	Changed “four” to “quadruple” for clarity.

19.	S7.4.2.2.1, 2 nd para, 1 st sent	Added “All data from the Q-DCIS and N-DCIS networks are available for display on the RSS panels” consistent with the intent of Response to RAI 7.5-3 S02 via MFN 06-137, Supp 3.
20.	S7.4.2.2.1, 4 th para, 2 nd sent	Replaced “the interfacing systems” with “interfacing safety-related systems” for clarity and to comply with proper nomenclature.
21.	S7.4.2.2.3, 2 nd para	<ul style="list-style-type: none"> • Changed “assumed” to “assured” in 4th sentence to correct the statement. • Inserted “reactor” in 5th sentence to better describe the pressure regulator.
22.	S7.4.2.3.1	<ul style="list-style-type: none"> • Changed title of 10 CFR 50.55a(a)(1) for consistency. • Deleted “RSS conforms in that there are no unresolved issues for the RSS” in 3rd bullet for consistency.”
23.	S7.4.2.3.3	<ul style="list-style-type: none"> • Reworded conformance statement for RG 1.53 for conformity and readability. • Reworded conformance statement for RG 1.75 for conformity and readability. • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Deleted “based on the assumption that the interpretations and clarifications identified in Subsection 7.1.6.4 apply to the system” from RGs 1.180 and 1.204 in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
24.	S7.4.2.3.4	Reworded conformance statement for BTP HICB-16 for conformity.
25.	S7.4.2.3.5, 1 st para, last sent	Deleted “Chapter 1,” as unnecessary.
26.	S 7.4.2.4	Added 2 nd para with heading “Minimum Requirements to Place and Maintain Plant in MODE 3 from Location Outside MCR” to resolve an issue with bracketed items in Chapter 16.
27.	S7.4.3.1	Added the 1 st and 2 nd sentences from 7.4.3.1.1 (Rev 4), “The RWCU/SDC design bases are described further in Subsections 5.4.8.1 and 5.4.8.2. Figures 5.1-4 shows the basic configuration of the RWCU/SDC system.” into this subsection to serve as an introductory sentence for the following subsections.
28.	S7.4.3.1.1	Replaced text and heading of this subsection with “Deleted”. Some of the text moved to 7.4.3.1 (as described above). The first sentence of the 2 nd paragraph was moved to “Nonsafety-Related Design Bases,” in 7.4.3.1.2. The last three sentences of the 2 nd paragraph were deleted as unnecessary.

29.	S7.4.3.1.2	<ul style="list-style-type: none"> • Changed subsection title from “Safety-Related Design Bases” to “Nonsafety-Related Design Bases” to better describe the information below. • Added text “RWCU/SDC is one of the dual redundant Plant Investment Protection (PIP) systems whose instrumentation belongs to the N-DCIS” as described above.
30.	S7.4.3.1.3, 1 st para, last bullet	Inserted “Provides suppression pool cooling” to support addition of new FAPCS to RWCU/SDC crosstie.
31.	S7.4.3.1.3, 2 nd para	<ul style="list-style-type: none"> • Added “core” to first sentence to more clearly describe reactivity. • Inserted “prevent” in 4th sentence for clarity.
32.	S7.4.3.2.1, 1 st para, sent 5-7	Inserted these sentences to describe addition of a FAPCS to RWCU/SDC crosstie.
33.	S7.4.3.2.2, 6 th para	Replaced “, with the exception of reactor bottom suction sampling line containment isolation valves, from opening (if closed) or closing the valves (if open)” with “from opening (if closed) or close the valves (if open) are” for readability and to remove redundancy.
34.	S7.4.3.2.2, 12 th para, 2 nd sent	Replaced “of 25°C (77°F), so conductivity elements are not required to be temperature compensated” with “eliminating the need for temperature compensation” for brevity and to remove unnecessary detail.
35.	S7.4.3.2.2, last para	Replaced “Plate type flow” with “Flow” to remove unnecessary detail.
36.	S7.4.3.3, 1 st para, 2 nd sent	Replaced “break” with “leak” to generalize the statement.
37.	S7.4.3.3.1, 1 st para	Changed title of 10 CFR 50.55a(a)(1) for consistency.
38.	S7.4.3.3.1, 2 nd para	<ul style="list-style-type: none"> • Changed header from “10 CFR 50.55a(h) (IEEE Std. 603)” to “10 CFR 50.55(a)(h), Protection and Safety Systems Compliance to IEEE Std 603:” for clarification. • Changed “Addressing RG 1.153 and IEEE Std 603 below covers 10 CFR 50.55a(h) conformance” to “The RWCU/SDC system is nonsafety-related, 10CFR 50.55a(h) and IEEE Std. 603 are not applicable to this system” for clarification.
39.	S7.4.3.3.2	Reworded conformance statement for conformity and readability.

40.	S7.4.3.3.3	<ul style="list-style-type: none"> • Distributed the conformance statement to give each RG its own conformance statement for consistency. • Inserted RG 1.151 with conformance statement in accordance with NRC Generic Letter 2008-01. • Deleted references to 7.1.6.4 and Table 7.1-1 in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
41.	S7.4.3.3.4, bullet	Added “level of detail provided for the” for consistency.
42.	S7.4.3.5, 8 th bullet.	Change “(reactor water sides),” to “(reactor coolant sides),” for clarity and to comply with proper nomenclature.
43.	S7.4.4.1, 2 nd par	Replaced “instrumentation” with “I&C” for clarity.
44.	S7.4.4.2	Replaced “(IEEE Std. 603, Sections 4.12 and 5.4). Because the ICS is designed as a safety-related system, it complies with the equipment qualification requirements of IEEE Std. 603, Section 5.4” with “for the ICS system description” since discussion of IEEE 603 Std. 603 Sections 4.12 and 5.4 are too limiting.
45.	S7.4.4.3, 1 st para, last sentence.	Changed “power sources” to “UPS” to clarify power sources.
46.	S7.4.4.3, 4 th para	<ul style="list-style-type: none"> • Replaced “to provide mitigation for LOCA events” with “to provide additional liquid inventory to mitigate LOCA events” in 1st sentence for clarity. • Deleted 2nd sentence “The ICS receives an actuation command following a confirmed LOCA signal after a time delay corresponding to the first DPV actuation (as described in the ADS logic discussion in Subsection 7.3.1.1.2).” as incorrect information.
47.	S7.4.4.3, 5 th para, 1 st sent	Replaced “ICS typically starts operating automatically upon” with “signals that initiate ICS operation are” to facilitate the formation of the bulleted list.
48.	S7.4.4.3, 5 th para, 4 th bullet	Changed “loss of power generation buses (from the same signal that initiates reactor scram), loss of feedwater (loss of power to two out of four feedwater pumps)” to “loss of power generation (loss of feedwater flow)” for conciseness.
49.	S7.4.4.3, 5 th para	Removed “Each ICS train also can be manually initiated so” at the beginning of the 6 th paragraph and replaced it with “Operator manual initiation” as the last bullet of the 5 th paragraph.

50.	S7.4.4.3, 7 th para, 1 st sent	Added “The ICS automatically opens equalizing valves between the equipment storage pool and the IC/PCC expansion pools when a low water level is detected in either of the IC/PCC expansion pools to provide makeup water to support design basis events” to better represent the design.
51.	S7.4.4.3, 8 th para.	Replaced “ICS actuation and other ICS functions” with “ICS initiation and opening of equalizing valves between the equipment storage pool and the IC/PCC expansion pools” to better represent the design.
52.	S7.4.4.3.1	<ul style="list-style-type: none"> • Added “10 CFR 50.34(f)(2)(xxiii)[II.K.2.10], Anticipatory Reactor Trip” with conformance statement as committed in Response to RAI 7.1-71 via MFN 08-280. • Inserted “Conformance” in 7th bullet for consistency.
53.	S7.4.4.3.2	Added conformance statements to GDC 20, 21, 22 and 23 for consistency with Section 7.3 for ESF protection system requirements since ICS performs an ECCS function,.
54.	S7.4.4.3.3	Added SRM conformance subsection and conformance statement for SECY 93-087, Item II.Q, as they are applicable to the ICS and to ensure a consistent treatment of all ESF protective functions.
55.	S7.4.4.3.4 (7.4.4.3.3 Rev 4)	<ul style="list-style-type: none"> • Renumbered subsection due to addition of SRM subsection. • Reworded conformance statement for RG 1.53 for consistency. • Reworded conformance statement for RG 1.75 for consistency and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Reworded conformance statement to RG 1.105 as committed in Response to RAIs 16.2-146 and 16.2-149 submitted via MFN 07-536. • Added RG 1.151 with conformance statement in accordance with NRC Generic Letter 2008-01. • Added “Conformance:” to RG 1.180 conformance statement. • Deleted “is based on the assumption that the interpretations and clarifications identified in Subsection 7.1.6.4 apply to the system” from RGs 1.180 and 1.204 in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.

56.	S7.4.4.3.5 (7.4.4.3.4 Rev 4)	<ul style="list-style-type: none"> • Renumbered subsection due to addition of SRM subsection. • Replaced “fiber optic cables” with “safety-related fiber optic communication interface modules and fiber optic cables” in conformance statement for BTP HICB-11 for consistency with Section 7.1.3.3. • Deleted “Additional discussion is provided in Subsection 7.2.1.3.5” for consistency. • Added “Conformance:” to BTP HICB-13 conformance statement. • Reworded conformance statement for BTP HICB-16 for consistency. • Added BTP HICB-19 conformance as applicable to the ICS and to ensure a consistent treatment of all ESF protective functions.
57.	S7.4.6	<ul style="list-style-type: none"> • Replaced reference to SRP with “(Deleted)” since the SRP is not called out in the section. • Revised Reference 7.4-2 as committed in MFN 07-536.
58.	F 7.4-3	Revised Figure due to change in terminology from keylock switch to disable switch.

TIER 2 SECTION 7.5 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.5, 2 nd para, 1 st sent	Replaced “CMS, PRMS, Pool Monitoring Subsystems, and Wetwell to Drywell Vacuum Breakers” with “CMS, PRMS, and Pool Monitoring Subsystems” as committed in Response to RAI 6.3-63 via MFN 08-346.
2.	S7.5, 3 rd para, 1 st sent	Replaced “generally” with “schematically” for accuracy.
3.	S7.5.1.1, 1 st sent	Added the word ‘related’ which was inadvertently omitted.
4.	S7.5.1.2, 2 nd para	Removed “do not” for clarity.
5.	S7.5.1.3.1	<ul style="list-style-type: none"> • Changed “10 CFR 50.55a(a)(h)” to “10 CFR 50.55a(h)” to correct typographical error. • Added “safety-related” and “Q-DCIS interdivisional and cross-platform signal transmission is performed via fiber optic cables” to 2nd bullet to limit the scope of the conformance to only safety-related functions. • Added “of Appendix 1A” into 5th bullet and 7th bullet for clarity. • Deleted “Additional information is provided in Subsection 7.5.1.3.1.4” for consistency.
6.	S7.5.1.3.2	<ul style="list-style-type: none"> • Deleted GDC 23 because it is not required by NUREG 0800.
7.	S7.5.1.3.4	<ul style="list-style-type: none"> • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Deleted “as discussed in Subsection 7.1.6.4” from RGs 1.180 and 1.204 conformance statements because the reference is inconsistent with conformance statements in other sections.
8.	S7.5.1.3.4 Performance Criteria, 1 st para	Deleted “-2002” from IEEE Std. 497 in 1st paragraph to make it consistent throughout the section.
9.	S7.5.1.3.4 Qualification Criteria, 1 st para	Deleted “-2002” from IEEE Std. 497 for consistency.

10.	S7.5.1.3.4 Display Criteria, 5 th para, 1 st sent	<ul style="list-style-type: none"> • Replaced “accident monitoring” with “PAM” for clarity. • Replaced “this information” with “data” for clarity .
11.	S7.5.1.3.4 Display Criteria, 6 th para	Replaced “information also can be transmitted via isolated safety-related gateways to the N-DCIS” with “information is also available to the N-DCIS, through the qualified safety-related isolation devices,” for consistency with Subsection 7.1.3.3.
12.	S7.5.1.3.4 Quality Assurance	Replaced “, as accepted by the Nuclear Regulatory Commission (NRC)” with “(Reference 7.5-1)” for clarity.
13.	S7.5.1.3.5	Added BTP HICB 16 with conformance statement to correct a previous oversight.
14.	S7.5.2.1 1 st para, 3 rd bullet	Added “Table 7.5-5 provides the instrument ranges for these parameters.” as committed in Response to RAIs 6.2-136 S02 and 6.2-137 S02 via MFN 08-333.
15.	S7.5.2.1 1 st para, 6 th bullet	Replaced “high oxygen levels, high hydrogen levels,” with “high oxygen concentration levels, high hydrogen concentration levels,” for clarity.
16.	S7.5.2.1 1 st para, 8 th bullet	Replaced “boiloff from the Isolation Condenser/Passive Containment Cooling System (IC/PCCS) that may accumulate” with “increases in water level that may occur” due to design changes in the feedwater line isolation signal.
17.	S7.5.2.1 1 st para, last bullet, 1 st sent	Added “, including drywell pressure inputs for reactor scram protection monitoring” for consistency with Section 7.5.2.2.
18.	S7.5.2.1, 2 nd para	Deleted “The drywell and wetwell volumes are provided with two additional safety-related differential pressure transmitters, connected between these two volumes. These channels are used for vacuum breaker valve monitoring” consistent with the intent of Response to RAI 6.3-63 via MFN 08-346.
19.	S7.5.2.2, 5 th bullet	Replaced “one manual inner valve and one remote-control outer valve” with “one valve inside containment and one valve outside containment” to better represent the design and increased clarity.

20.	S7.5.2.2 10 th bullet	<ul style="list-style-type: none"> • Replaced “These drywell pressure signals also” with “Four additional safety-related drywell pressure signals” in 2nd sentence for consistency with ESBWR I&C Defense-In-Depth and Diversity Report (NEDO-33251). • Replaced “In addition, these pressure signals and alarms are hardwired to the MCR to provide diverse information for operator use.” with “The containment isolation function is discussed in Subsection 6.2.4.” due to design changes in the feedwater line isolation signal.
21.	S7.5.2.2 11 th bullet	Added this bullet due to design changes in the feedwater line isolation signal.
22.	S7.5.2.2 13 th bullet (Rev 4)	Deleted bullet and text as committed in Response to RAI 6.3-63 via MFN 08-346.
23.	S7.5.2.2 15 th bullet	Replaced “Two of the wide range water level signals are used” with “The wide range water level signals are available” due to design changes in the feedwater line isolation signal.
24.	S7.5.2.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.34(f)(2)(viii)[II.B.3] with conformance statement for consistency with Table 1A-1 of Appendix 1A. • Added 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] with conformance statement consistent with the intent of Response to RAI 7.2-4 S01 via MFN 06-146 Supp 01.
25.	S7.5.2.3.4	<ul style="list-style-type: none"> • Added individual conformance statements to RGs 1.47, 1.53, 1.75, 1.105, 1.118, 1.153, 1.168, 1.169, 1.170, 1.171, 1.172, and 1.173 to be consistent with other sections. • Added RG 1.97 with conformance statement consistent with the intent of Response to RAI 7.5-3 via MFN 06-137. • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Added RG 1.151 with conformance statement in accordance with NRC Generic Letter 2008-01 • Deleted references to 7.1.6.4 from RGs containing them in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. • Added RG 1.209 consistent with the intent of RG 7.1-47 via MFN 07-505.

26.	S7.5.2.3.5	<ul style="list-style-type: none"> • Added individual conformance statements to BTP HICBs 11, 12, 13, 14, 16, 17, 18, and 21 to be consistent with other sections. • Moved text “Subsection 7.3.5.3.5 provides a discussion of BTP HICB-14, BTP HICB-17, BTP HICB-18, and BTP HICB-21 in conjunction with the SSLC/ESF system” to new paragraph. • Moved text related to BTP HICB-13 from entry for BTP HICB-21 to BTP HICB-13 for consistency.
27.	S7.5.2.3.6	<ul style="list-style-type: none"> • Added “10 CFR 50.34(f)(2)(viii)[II.B.3]” for consistency with Table 1A-1 of Appendix 1A. • Inserted “In addition, 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3], also applies” consistent with the intent of Response to RAI 7.2-4 S01 via MFN 06-146 Supp 01. The presentation was changed since 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] is not in the SRP Section 7.5 or Table 7.1-1.
28.	S7.5.3, 2 nd para, 2 nd sent	Added “the potential for” for clarity.
29.	7.5.3.3, 1 st para	Deleted “The system design conforms to the System Design Bases” as non-value added.
30.	S7.5.3.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.34(f)(2)(viii)[II.B.3] with conformance statement for consistency with Table 1A-1 of Appendix 1A. • Added 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] consistent with the intent of Response to RAI 7.2-4 S01 via MFN 06-146 Supp 01.
31.	S7.5.3.3.4	<ul style="list-style-type: none"> • Added individual conformance statements to RGs 1.47, 1.53, 1.75, 1.105, 1.118, 1.153, 1.168, 1.169, 1.170, 1.171, 1.172, and 1.173 to be consistent with other sections. • Added RG 1.97 with conformance statement as committed in response to RAI 11.5-49 via MFN 08-145 (with minor editorial change). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Added “Reference 7.5-2 provides a detailed description of the GEH setpoint methodology.” to RG 1.105 conformance statement for consistency with other conformance sections. • Deleted references to 7.1.6.4 from RGs containing them in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.

32.	S7.5.3.3.5	<ul style="list-style-type: none"> • Added BTP-HICB-10 with conformance statement as committed in response to RAI 11.5-49 via MFN 08-145 (with minor editorial changes). • Added individual conformance statements to BTP HICBs 11, 12, 13, 14, 16, 17, 18 and 21 to be consistent with other sections. • Moved text “BTP HICB-14, BTP HICB-17, BTP HICB-18, and BTP HICB-21 are addressed in conjunction with the SSLC/ESF in Subsections 7.3.5.3.5 and 7.1.6.5.” to new paragraph. • Moved text related to BTP HICB-13 from entry for BTP HICB-21 to BTP HICB-13 for consistency.
33.	S7.5.3.3.6	<ul style="list-style-type: none"> • Inserted reference to 10 CFR 50.34(f)(2)(viii)[II.B.3], for consistency with Table 1A-1 of Appendix 1A. • Inserted reference to 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] as committed in response to RAI 7.2-4 S01 in MFN 06-146 Supp 01.
34.	S7.5.3.5	<ul style="list-style-type: none"> • Changed “see” to “I&C requirements are provided in” for clarity. • Deleted reference to Subsection 11.5.2.1 as it is no longer valid.
35.	S7.5.4, 1 st para., 1 st sentence	Replaced “within the various areas of” with “throughout” for readability.
36.	S7.5.4, 1 st para., last sentence	Add “and very high” between the words “high” and “radiation” consistent with the intent of response to RAI 14.2-94 via MFN 08-137.
37.	S7.5.4.1	Replaced “The system design conforms with the System Design Bases” with “The ARMS continuously measures, indicates, and records area radiation levels” to better describe design bases.
38.	S7.5.4.3.1	Inserted 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] consistent with the intent of Response to RAI 7.2-4 S01 in MFN 06-146 Supp 01.
39.	S7.5.4.3.3	<ul style="list-style-type: none"> • Added RG 1.97 with conformance statement consistent with the intent of Response to RAI 7.5-3 via MFN 06-137. • Deleted “as discussed in Subsection 7.1.6.” from RGs 1.180 and 1.204 conformance statements in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
40.	S7.5.4.3.4	<ul style="list-style-type: none"> • Added BTP-HICB 10 with conformance statement as committed in Response to RAI 12.4-25 via MFN 08-466. • Replaced “The DCD Tier 2 level of detail for ARMS complies with the above BTP” with “The level of detail provided for the ARMS complies with BTP HICB-16” for consistency.

41.	S7.5.4.3.5	Inserted reference to 10 CFR 50.34(f)(2)(xxvii)[III.D.3.3] as committed in Response to RAI 7.2-4 S01 in MFN 06-146 Supp 01.
42.	S7.5.4.4	Deleted “Surveillance Testing and In-Service Inspection (ISI) activities for the ARMS follow.” as non-value added.
43.	S7.5.5, 1 st para	Revised the entire paragraph and moved it below the “Suppression Pool” heading for clarity, to better describe the conformance to functional requirements.
44.	S7.5.5, 2 nd para	Replaced “The temperature instrument generates a high water temperature signal when the suppression pool water temperature exceeds a high temperature limit.” with “The CMS instruments provide functions necessary to maintain suppression water temperature and level required for safety-related Emergency Core Cooling System (ECCS) functions. For this reason, they are classified as safety-related” to reduce verbiage and consolidate similar information from 1 st and 4 th paragraphs (Rev 4).
45.	S7.5.5, 4 th para, (Rev 4)	Moved this information to 2 nd paragraph to consolidate like information.
46.	S7.5.5, Spent Fuel Pool, 2 nd para, 3 rd sent	Replaced “generate high, low, and low-low water level signals when the water level reading exceeds its setpoint” with “generate high-high, high, low, or low-low water level signals when the water level reading increases above or decreases below its setpoint” to clarify instrument function.
47.	S7.5.6	Deleted this subsection and heading as committed in Response to RAI 6.3-63 via MFN 08-346.
48.	S7.5.8	<ul style="list-style-type: none"> • Added reference 7.5-1 as required by the text. • Added reference 7.5-2 as required by the text.
49.	Table 7.5-4	<ul style="list-style-type: none"> • Replaced text “[0%] gas concentration and nominal level from [2%] to approximately [5%] from calibrated sources” with “0% gas concentration and nominal level from 0% to approximately 5% from calibrated sources” as committed in response to RAI 6.2-137 S02 in MFN 08-333. • Replaced “Less than 0.01cc/sec” with “Design leakage is less than 0.01cc/sec” for clarity.
50.	Table 7.5-5	Added Table 7.5-5 as committed in response to RAI 6.2-167 S01 via MFN 08-361.
51.	Figure 7.5-3	Revised Block Diagram to remove RMS Computer since RMS computer not required per PRMS System Design Specification

TIER 2 SECTION 7.6 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.6, Various	Deleted references to IEEE Std.603 as HP/LP interlock system is reclassified from safety-related to nonsafety-related.
2.	S7.6.1.1, 1 st para	Added “it has the following interfaces with the high pressure Reactor Water Cleanup/Shutdown Cooling (RWCU/SDC) system.” as committed in response to RAI 6.2-140 via MFN 08-332.
3.	S7.6.1.1, 1 st para bullets	<p>Added the following FAPCS to the RWCU crosstie HP/LP interfaces due to design upgrade in response to RAI 6.2-140 via MFN 08-332:</p> <ul style="list-style-type: none"> • Crosstie connection from Suppression pool suction line to the RPV RWCU line to the regenerative heat exchanger and from the RWCU return line (to RPV) to the FAPCS discharge line to the suppression pool, GDSCS pools and containment spray line.
4.	S7.6.1.1, 3 rd para	<ul style="list-style-type: none"> • Replaced “squib valves end is open” with “squib valves is open” to better represent the design. • Changed reference from “7.3.1.2.1” to “7.3.1.2 and removed “of 7.6.1” as references were too limiting. • Replaced “The subsequent subsections of 7.6.1 describe the LPCI line” with “Subsequent subsections describe the FAPCS” to accommodate new crosstie connection.

5.	S7.6.1.2.1, 1 st para	<ul style="list-style-type: none"> • Changed LPCI line isolation valves makeup, type and logic design safety classification. The entire paragraph is revised to reflect these design changes. Design changes are as follows: <ul style="list-style-type: none"> – On-off air operated valves are changed to motor operated valves. – The testable check valves and the motor operated valves are nonsafety-related. – Logic for operation of these valves is nonsafety-related and is implemented in the PIP A N-DCIS and PIP B N-DCIS. – Power supply for pair of motor operated valves is provided by PIP A and PIP B Buses. • Described the function and location of safety relief (similar sentence is deleted from section 7.6.1.2.7).
6.	S7.6.1.2.1, 2 nd para	Added new paragraph as committed in response to RAI 6.2-140 via MFN 08-332.
7.	S7.6.1.2.2	Revised entire paragraph due to reclassification of the system from safety-related to nonsafety-related.
8.	7.6.1.2.3	Deleted entire subsection and heading as redundant to S7.6.1.2.4.
9.	S7.6.1.2.4	Revised entire paragraph due to reclassification of the system from safety-related to nonsafety-related.
10.	S7.6.1.2.7	<ul style="list-style-type: none"> • Revised entire paragraph to address issues described above (S7.6.1.2.1, 1st paragraph) and clarify diversity. • Moved the last sentence to section 7.6.1.2.1
11.	S7.6.1.2.8	Revised entire paragraph to better describe valve actuation.
12.	S7.6.1.2.9	Revised entire paragraph to identify the logic separation and power separation for operation of air operated parallel testable check valves and motor operated parallel valves. Parallel valves provide these separations.
13.	S7.6.1.2.11	Revised “safety-related equipment” to “nonsafety-related equipment” due to change in design.
14.	S7.6.1.2.12	Added “for the HP/LP interlock system” for clarity.
15.	S7.6.1.2.13	Replaced “state of the sensors” with “status of the pressure instruments” for clarity.
16.	S7.6.1.2.14	Added, “HP/LP interlock system” for clarity.

17.	S7.6.1.3, 2 nd para	Added 2 nd paragraph to clarify the HP/LP interface and how the isolation valves provide the protection of the low pressure FAPCS from the high pressure RWCU system.
18.	S7.6.1.3, 4 th para	Added 4 th paragraph to identify the importance of the LPCI line and the HP/LP interlock system as it provides path for fire water/suppression pool water to RPV and its identification as RTNSS.
19.	S7.6.1.3., last para	Clarified the HP/LP interlock system logic as nonsafety-related logic to more accurately describe current design.
20.	S7.6.1.3.1, 1 st para	10CFR 50.55a(a)(1)- Identified that HP/LP interlock system is nonsafety-related, however it falls under RTNSS therefore the quality assurance requirements are similar to those for safety-related components.
21.	S7.6.1.3.1, 2 nd para	Revised that the HP/LP interlock system is nonsafety-related therefore 10 CFR 50.55a(h) and IEEE Std. 603 are not applicable. Added description of how nonsafety-related HP/LP interlock system provides separation and isolation (mechanically and electrically).
22.	S7.6.1.3.3, 2 nd bullet RG 1.53	Revised that the HP/LP interlock system is nonsafety-related therefore RG 1.53 is not applicable.
23.	S7.6.1.3.3, 3 rd bullet RG 1.75	Revised conformance statement to indicate that while HP/LP interlock system is not safety-related, physical and electrical separation are maintained.
24.	S7.6.1.3.3, 4 th bullet RG 1.105	Revised to explain that the HP/LP interlock system is nonsafety-related therefore RG 1.105 is not applicable and point the reader to setpoint methodology.
25.	S7.6.1.3.3, 7 th – 15 th bullets	<ul style="list-style-type: none"> • Modified RG 1.152, RG 1.153, RG 1.168, RG 1.169, RG 1.170, RG 1.171, RG 1.172, and RG 1.173 conformance statements as not applicable since HP/LP is nonsafety-related. • Added individual conformance statements for RGs 1.180 and 1.204.
26.	S7.6.1.3.4, entire subsection.	Added individual conformance statements to BTPs for consistency and as a result of the reclassification from safety-related to nonsafety-related.

27.	S7.6.1.3.4, 3 rd Bullet BTP HICB-12	<ul style="list-style-type: none"> • Noted that BTP HICB-12 is not applicable to the nonsafety-related HP/LP interlock system. • Added text “The nominal setpoints are calculated using the GEH setpoint methodology (Reference 7.6-1)” consistent with the intent of RAIs 16.2-146 & 16.2-149 via MFN 07-536.
28.	S7.6.1.3.4, 4 th Bullet BTP HICB-14	Noted that BTP HICB-14 is not applicable to the nonsafety-related HP/LP interlock system.
29.	S7.6.1.3.4, 7th bullet BTP HICB-18	Inserted a conformance statement for BTP HICB-18 for consistency.
30.	S7.6.1.3.4, 8th bullet BTP HICB-21	Noted that BTP HICB-21 is not applicable to the nonsafety-related HP/LP interlock system.
31.	S7.6.2 & 7.6.2.1	Deleted paragraphs to reflect the RAI 7.6-2 (MFN 07-163) response. (Paragraph is erroneously added in Rev 03).
32.	S7.6.4	Added Reference 7.6-1 as required by the text.

TIER 2 SECTION 7.7 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	7.7, 1 st para, 1 st bullet	Added “, and portions of safety-related subsystems,” since S7.7 covers both safety-related and nonsafety-related portions of the NBS.
2.	S7.7.1.1.1, 1 st para, 1 st sent	Added “safety-related portions of” for clarity.
3.	S7.7.1.1.1, 1 st para, 3 rd bullet	Replaced “redundancy” with “divisionally separated instruments” for clarity.
4.	S7.7.1.1.2, 1 st para, 1 st sent	Added “nonsafety-related portions of” for clarity.
5.	S7.7.1.1.2, 2 nd para, 1 st sent	Deleted “To the extent practical” as non-value added.
6.	S7.7.1.2.1, 1 st para, 1 st sent	Deleted “and systems” as inaccurate.
7.	S7.7.1.2.1, 1 st para, 2 nd sent	Replaced “The instrumentation discussed in this subsection is also discussed in Section 5.1, and is shown in Figure 7.3-1a and 7.3-1b, NBS Automatic Depressurization System (ADS) Initiation Logic” with “The NBS instruments measure the reactor coolant temperature, RPV temperature, RPV water level, RPV pressure, main steam flow rate, and detect SRV leakage” as more relevant text for a summary description.
8.	S7.7.1.2.2, 4 th para, 1 st sent	Replaced “systems” with “system functions” (twice) for accuracy.
9.	S7.7.1.2.2, 5 th para, 1 st sent	Replaced “and the reactor system may be” with “including when the reactor system is” for increased accuracy.
10.	S7.7.1.2.2, 5 th para, 4 th sent	Replaced “nozzle elevations” with “nozzles” for clarity.
11.	S7.7.1.2.2, Main Steam Flow Rate	<ul style="list-style-type: none"> • Inserted “main” to first sentence to clarify steam flow rate. • Added “The square root of” to 3rd sentence for accuracy. • Added “Outputs from” to 5th sentence for accuracy.

12.	S7.7.1.3	1 st paragraph revised and moved to become the 2 nd paragraph for readability.
13.	S7.7.1.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.34(f)(2)(xviii)[II.F.2] and conformance statement as committed in Response to RAI 7.1-40 via MFN 07-285 with minor editorial changes. • Replaced “systems” with “portions of the NBS” for clarity. • Deleted “RG 1.153 and” from 3rd bullet for consistency with regulation title. • Deleted " 7.1.6.4, and " from 3rd bullet in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. • Inserted “Conformance: ” into conformance statements for consistency. • Replaced “DCD” with “Tier1.” in 6th bullet to act as a better guide.
14.	S7.7.1.3.4	<ul style="list-style-type: none"> • Deleted reference to subsection 7.1.6.4 in all RGs that have them in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections. • Reworded conformance statement for RG 1.75 for consistency and readability. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-430). • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Inserted “safety-related portions of the” to RG 1.105 conformance statement for clarity. • Added “Reference 7.7-3 provides a detailed description of the GEH setpoint methodology” to conformance statement for RG 1.105 for consistency with other sections. • Deleted “RGs 1.152, 1.168, 1.169, 1.170, 1.171, 1.172, and 1.173 are discussed in Subsection 7.1.6.4” and added individual conformance statements for consistency with other subsections. • Replaced “ISA-67.02” with “ISA-67.02.01” in both places it appears in RG 1.151 conformance statement for accuracy. • Changed the title of RG 1.153 for consistency. • Revised conformance statement to RG 1.153 for consistency. • Added individual conformance statement to RG 1.180 for consistency.

15.	S7.7.1.3.5	<ul style="list-style-type: none"> • Added titles to BTP HICBs 11, 12 and 16 for completeness. • Changed conformance statement of HICB BTP-11 from “The approach to compliance with RG 1.75 and RG 1.153 is discussed above” to “The NBS design complies with BTP HICB-11” for clarity and consistency. • Revised the conformance statement of BTP HICB-12 for clarity and consistent with the intent of RAIs 16.2-146 & 16.2-149 via MFN 07-536. • Inserted “Conformance” into conformance statements for consistency. • Deleted " and in Subsection 7.1.6.5" in last paragraph in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
16.	S7.7.1.5, 4 th bullet	Replaced “low” with “high bottom head to reactor coolant differential” as committed in Response to RAI 7.7-4 in MFN 07-336.
17.	S7.7.2	Relocated text from Subsection 7.7.2.1.2, 1 st para for better flow of thought. Removed “By controlling the FMCRD motors and the CRD brakes,” from the text since controlling does not result in acquiring status.
18.	S7.7.2.1.2, 1 st para	Relocated first four sentences to Subsection 7.7.2 for better flow of thought.
19.	S7.7.2.1.2, 6 th bullet	Replaced “ARI” with “FMCRD” to describe the Run-in function to use terminology consistent with Section 7.8.
20.	S7.7.2.1.2, 7 th bullet	Removed and reworded much of this paragraph because the SCRRI function is moved to the DPS.
21.	S7.7.2.1.2, 9 th bullet	Replaced “LPSP” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints.
22.	S7.7.2.1.2, 11 th bullet	Moved “Through the capabilities of the gang rod selection and verification logic of the Rod Action and Position Information (RAPI) subsystem” to the end of the bullet for consistency with other bullets.
23.	S7.7.2.2.1, 2 nd para, 1 st sent	Deleted “(Scram-Follow, ARI, SCRRI)” for consistency with Subsection 7.1.5.2.3.12.

24.	S7.7.2.2.1, 2 nd para, 2 nd sent	Replaced “with the additional input signal coming from the associated emergency rod insertion panels. An automatic single channel bypass occurs when an emergency insertion function is activated. It ensures high availability for the emergency insertion functions when a single channel failure condition exists.” with “To assure high reliability for the emergency insertion function, a single RC&IS bypass is automatically enabled with the ARI signal.” for ease of understanding.
25.	S7.7.2.2.1, 5 th para, 3 rd sent	Replaced “consists of RAPI-A panel and RAPI-B panel” with “are RAPI-A and –B” for clarity.
26.	S7.7.2.2.1, 8 th para, 1 st sent	Replaced “Logic for both RSPCs receives” to “Both RSPCs receive for conciseness.
27.	S7.7.2.2.1, Emergency Rod Insertion Control Panel, 2 nd sent	Replaced “ERICP” with “ERIP” to correct the error.
28.	S7.7.2.2.1, Emergency Rod Insertion Control Panel, 3 rd sent	Deleted “portions of the SSLC panels” because RPS is not part of the SSLC/ESF panels.
29.	S7.7.2.2.1, (Scram Time Recording and Analysis Panel)	Deleted “located in the MCR back panel area,” as repetitive to last sentence of previous paragraph.
30.	S7.7.2.2.3	Consolidated last two sentences (Rev 4) into one for readability.
31.	S7.7.2.2.4, 1 st para, 2 nd sent	Replaced “This provides a 3-phase AC power source required for energization of the associated FMCRD induction motors and motor built-in brakes by the IMCCs” with “This 3-phase AC power source is required by the IMCCs to energize the associated FMCRD induction motors and MBBs” for readability.
32.	S7.7.2.2.4, 2 nd para	<ul style="list-style-type: none"> • Replaced “three” with “four” throughout the paragraph due to a change in electrical design. • Replaced “motor run-in ARI” with “FMCRD motor Run-in” in last sentence to describe the Run-in function to use terminology consistent with Section 7.8.
33.	S7.7.2.2.6, 2 nd para, 7 th bullet	Replaced “ARI” with “FMCRD” to describe the Run-in function, and removed “ARI” from the description of the control rods to use terminology consistent with Section 7.8.

34.	S7.7.2.2.7.1, 6 th para, last sent	Replaced “later in this subsection” with “in Subsection 7.7.2.2.7.4” to increase ease of navigation.
35.	S7.7.2.2.7.4, 3 rd para, 2 nd sent	Replaced “selector” with “RC&IS mode” to increase accuracy of the statement.
36.	S7.7.2.2.7.4, 4 th para, 1 st bullet	Inserted “for which the rods” for clarity.
37.	S7.7.2.2.7.4, 4 th para 9 th bullet	Replaced “low power setpoint” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints.
38.	S7.7.2.2.7.4, 4 th para 10 th bullet	Replaced “low power setpoint” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints.
39.	S7.7.2.2.7.6, last para	Deleted “bypass” from each bullet as redundant.
40.	S7.7.2.2.7.7, 1 st para	<ul style="list-style-type: none"> • Replaced “low power setpoint” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints. • Replaced “Operating Limit Minimum Linear Heat Generation Rate” with “Operating Limit Maximum Linear Heat Generation Rate” in second sentence to correct the naming error. • Inserted last two sentences as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
41.	S7.7.2.2.7.8	<ul style="list-style-type: none"> • Replaced “hard switches” with “control switches” in 1st and 3rd sentences to use correct terminology. • Replaced “SCCRI” with “SCCRI/SRI” in 3rd sentence to use correct terminology. • Removed 2 sentences (4th & 7th in Rev 4) because functionality is moved from RC&IS to the DPS. • Replaced “N-DCIS” with “DPS” in 4th sentence to better describe the function. • Replaced “ARI” with “FMCRD” to describe the Run-in function to use terminology consistent with Section 7.8.
42.	S7.7.2.2.7.10, 2 nd sent	Replaced “low power setpoint” with “ATLM enable setpoint” to differentiate between RWM and ATLM setpoints.
43.	S7.7.2.3	1 st paragraph moved to the end of the subsection for consistency.
44.	S7.7.2.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems. • Added “Conformance:” to the conformance statements that were lacking for consistency.

45.	S7.7.2.3.3	<ul style="list-style-type: none"> • Added an individual conformance statement to RG 1.180 and RG 1.204 for consistency. • Deleted “as discussed in Subsection 7.1.6.4” from RGs 1.180 and 1.204 in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
46.	S7.7.2.5, 1 st para, 3 rd sent	Inserted “AC” to better describe the power requirements.
47.	S7.7.3	Inserted paragraph to as committed in Response to RAI 4.3-12 via MFN 08-313. Note: “controllers” is replaced with “FTDCs” and “Each set of FTDCs is dedicated to perform one function” is added from the text committed in MFN 08-313 for clarity.
48.	S7.7.3.1.1	Replaced 2 nd & 3 rd paragraph (Rev 4) with a reference to Subsection 7.3.3 in 1 st paragraph to reduce the amount of redundant information.
49.	S7.7.3.1.2, 1 st para	<ul style="list-style-type: none"> • Added “; additionally the FWCS controls FW temperature to allow reactor power control without moving control rods” to 2nd sent as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD). • Added last 7 sentences as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
50.	S7.7.3.1.2, 2 nd para	<ul style="list-style-type: none"> • Consolidated 2 sentences into 3rd sentence for readability. • Added last two sentences as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
51.	S7.7.3.2.1, 1 st para	<ul style="list-style-type: none"> • Replaced “(Level 9) to low (Level 2)” with “(Level 8) to low (Level 3)” as this range is a more accurate description for feedwater control system functions. • Added 6th –8th sentences to reflect design changes regarding the feedwater pump/booster pump split. • Added last 3 sentences as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
52.	S7.7.3.2.1, 2 nd para, 1 st sent	Changed “The FWCS is implemented on the” to “Each function of the FWCS is implemented on its own dedicated set of” to accommodate feedwater temperature control discussion.
53.	S7.7.3.2.1, 2 nd para, 3 rd sent	Replaced “Each FTDC consists of three parallel processing channels” with “Each set of FTDCs consists of three parallel processing controllers” for clarity.

54.	S7.7.3.2.1, 2 nd para, 5 th sent (Rev 4)	Deleted “Additional information is provided in Mark VIe Control System Guide, N-DCIS Design Documents, GEH-6721B, Vol. 1, Rev C, Chapter 2, System Architecture (Reference 7.7-2)” since the GE proprietary document is not part of the DCD and therefore should not be incorporated by reference.
55.	S7.7.3.2.1, 2 nd & 3 rd para,	Replaced “FTDC channel” with “FTDC” for clarity.
56.	S7.7.3.2.1, 3 rd para., 1 st sent	Removed “processor” as unnecessary.
57.	S7.7.3.2.1, 3 rd para, last sent	Replaced “voter and alarm is activated” with “voter which causes the feed pump ASD to maintain the current pump speed and activates an alarm” to reflect design changes regarding the feedwater pump/booster pump split.
58.	S7.7.3.2.1, 4 th para	Inserted this paragraph as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
59.	S7.7.3.2.2	Inserted “(Level Control)” into subsection heading as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
60.	S7.7.3.2.2, 1 st para, 1 st sent	Replaced “feedwater flow provide” with “RPV water “ for clarity.
61.	S7.7.3.2.2, 1 st para, 2 nd bullet, 1 st sent	Added “and pressure” to represent current design.
62.	S7.7.3.2.2, 1 st para, 2 nd bullet, 3 rd sent	Replaced “proportional integral controller” and “(proportional integral) controller” with “controller” to remove unnecessary detail.
63.	S7.7.3.2.2, 1 st para, 2 nd bullet, 4 th sent	Replaced “use the discharge flow signals to balance RFP flows” with “use the suction flow rate signals to balance RFP flow rate demand” due to relocation of flow sensors.
64.	S7.7.3.2.2, 1 st para, 2 nd bullet, 5 th sent	Replaced “The trim controllers provide” with “The master flow controller output plus trim controller output are used to generate” to correct previous error.
65.	S7.7.3.2.2, 2 nd para, 2 nd sent	Inserted “, and trips the turbine”. This information was located in the 3 rd sentence in Rev 4. Moved for readability.

66.	S7.7.3.2.2, 2 nd para, 3 rd sent	<ul style="list-style-type: none"> Deleted “At reactor water setpoint Level 8 the main turbine is tripped and at Level 9, a trip signal is sent to the FW pump ASD control breaker” since Level 9 is no longer appropriate for FWCS. Received “On identification of an ATWS condition, the FWCS sends a zero flow demand signal to the feedpump ASDs” from last paragraph (Rev 4) for readability.
67.	S7.7.3.2.2, 2 nd para, last sent	Received “In addition, the FWCS initiates the signal to open the steam line condensate drain valves when steam flow rate falls below the 40% of nominal flow rate” from last paragraph (Rev 4) for readability.
68.	S7.7.3.2.2, 3 rd para (Rev 4)	Deleted “Additional feedwater temperature controls, monitoring, and alarms are provided to assist in power maneuvering using the number seven high-pressure feedwater heater and bypass around the high-pressure feedwater heaters. Refer to Section 10.4.” Since the ideas are better conveyed in Subsection 7.7.3.2.3. Portions of the text are addressed in subsection 7.7.3.2.3 revisions.
69.	S7.7.3.2.2, 4 th para (Rev 4)	Moved “A loss of feedwater heating that results in a significant decrease in feedwater temperature generates a signal that FWCS sends to N-DCIS to initiate SCRRI and SRI functions. This interlock limits the consequences of a reactor power increase due to cold feedwater. The temperature difference between feedwater lines A and B is monitored and alarmed if excessive.” Information included in 4 th paragraph of Subsection 7.7.3.3.
70.	S7.7.3.2.2, 4 th para (Rev 4)	Moved “In addition, the FWCS initiates the signal to open the steam line condensate drain valves when steam flow falls below 40% of rated flow, and the FWCS sends a zero-flow demand signal to the feed pump ASDs on identification of an ATWS condition” as described above.
71.	S7.7.3.2.2, 3 rd para	Added 1 st & 2 nd sentences as committed in Response to RAI 14.3-165 via MFN 08-086 S16 with minor editorial changes.
72.	S7.7.3.2.3	Inserted this subsection as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).

73.	S7.7.3.3, 1 st para	<ul style="list-style-type: none"> • Deleted “not safety-related and is not required for safe shutdown of the plant. It is” from 1st sentence as redundant to Subsection 7.7.3.1.1. • Relocated “The RPV water level rising to Level 8 or falling to Level 3 results in the shutdown of the reactor by the RPS” as 4th sentence which was previously located later in this paragraph for readability. • Revised entire paragraph to describe feedwater temperature control design changes and as committed in response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD). • Added “and the safety-related FW isolation valves are closed by LD&IS.” to 5th sentence to support changes in feedwater isolation design. • Added “by the DPS and the ASD controller power supply being interrupted by LD&IS” to 6th sentence to support changes in feedwater isolation design.
74.	S7.7.3.3, 3 rd – 5 th para	Added these paragraphs as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD).
75.	S7.7.3.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems. • Inserted “Conformance:” to conformance statements for consistency.
76.	S7.7.3.3.3	<ul style="list-style-type: none"> • Divided conformance statement for RG 1.180 and 1.204 into individual conformance statements for each. • Deleted “as discussed in Subsection 7.1.6.” from RGs 1.180 / 1.204 conformance statement in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
77.	S7.7.3.3.4	Deleted BTP HICB-19 and conformance statement because the title and conformance statement was an erroneous repeat of BTP-HICB 16.
78.	S7.7.3.5.5, 2 nd para	<p>Revised paragraph to describe design changes in measuring flow rate.</p> <ul style="list-style-type: none"> • Replaced ‘downstream’ with “upstream” in 1st sentence. • Replaced “discharge” with “suction and “a single transmitter” with “three transmitters” in 2nd sentence. • Replaced “discharge” with “suction” in 3rd and 4th sentences.

79.	S7.7.4.2, 2 nd para, 1 st sent	Replaced “NMS and the RPS (Subsection 7.2.2)” with “NMS (Subsection 7.2.2) and the RPS (Subsection 7.2.1)” for clarity.
80.	S7.7.4.2, 2 nd para, 2 nd sent	<ul style="list-style-type: none"> • Replaced “non-safety systems” with “nonsafety-related systems” to use correct terminology. • Added “(Subsection 10.2.2)” to end of sentence to act as a guide.
81.	S7.7.4.2, 5 th para	Added 3 rd and 5 th sentences as committed in Response to RAI 4.3-12 via MFN 08-313. Note: Removed “by control rod” from first sentence which was committed in Response to RAI 4.3-12 via MFN 08-313 since it is redundant to the latter half of the sentence.
82.	S7.7.4.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems. • Inserted “Conformance:” to conformance statements for consistency.
83.	S7.7.4.3.3	<ul style="list-style-type: none"> • Divided conformance statement for RG 1.180 and 1.204 into individual conformance statements for each. • Deleted “as discussed in Subsection 7.1.6.” from RGs 1.180 and 1.204 conformance statement in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
84.	S7.7.4.3.4	Inserted “Conformance:” to conformance statement for consistency.
85.	S7.7.5.1.2, 1 st para, 2 nd sent	Replaced “essential to” with “required for” to avoid possible confusion.
86.	S7.7.5.3, 1 st para, 3 rd sent	Replaced “essential to” with “required for” to avoid confusion.
87.	S7.7.5.3, 2 nd para	Replaced “control system” with “SB&PC System” for clarity.
88.	S7.7.5.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems. • Inserted “Conformance:” to 3rd conformance statement for consistency.

89.	S7.7.5.3.3	<ul style="list-style-type: none"> • Removed superfluous wording from reference to 7.7.1.3 in conformance statement to RG 151. • Divided conformance statement for RG 1.180 and 1.204 into individual conformance statements for each. • Deleted “as discussed in Subsection 7.1.6.” from RGs 1.180 and 1.204 conformance statement in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
90.	S7.7.5.3.4	Inserted “Conformance:” to conformance statement for consistency.
91.	S7.7.5.5.1.1	Replaced “power supply” with “UPS” for clarity.
92.	S7.7.5.6.1, last sent (Rev 4)	Deleted “The TBVs interface with the NBS to receive main steam supply” as redundant to text in 7.7.5.2.1.
93.	S7.7.5.6.2 (S 7.7.5.6.1.1 Rev 4)	Changed subsection numbering since the subsection does not fall under the NBS.
94.	S7.7.5.6.3 (S 7.7.5.6.1.2 Rev 4)	Changed subsection numbering since the subsection does not fall under the NBS.
95.	S7.7.5.6.4 (S 7.7.5.6.1.3 Rev 4)	<ul style="list-style-type: none"> • Changed subsection numbering since the subsection does not fall under the NBS. • Rearranged last sentence for clarity
96.	S7.7.5.6.5 (S 7.7.5.6.1.4 Rev 4)	Changed subsection numbering since the subsection does not fall under the NBS.
97.	S7.7.5.6.6 (S 7.7.5.6.1.5 Rev 4)	Changed subsection numbering since the subsection does not fall under the NBS.
98.	S7.7.5.6.7 (S 7.7.5.6.2 Rev 4)	Changed subsection numbering due to above numbering changes.
99.	S7.7.5.6.8 (S 7.7.5.6.2.1 Rev 4)	Changed subsection numbering due to above numbering changes.
100.	S7.7.5.6.9 (S 7.7.5.6.2.2 Rev 4)	Changed subsection numbering due to above numbering changes.
101.	S7.7.5.6.10 (S 7.7.5.6.2.3 Rev 4)	Changed subsection numbering due to above numbering changes.

102.	S7.7.6.1.1	Changed “Safety” to “Safety-Related” in subsection title to use correct terminology.
103.	S7.7.6.1.2, 1 st para, 3 rd bullet	Replaced “provide a totally automated mode of LPRM calibration” with “receive LPRM information” for consistency with other DCD Sections.
104.	S7.7.6.1.2, 2 nd para, 1 st bullet	Added “and prevent fuel damage” for clarity.
105.	S7.7.6.2.1.1, 1 st para, 7 th sent	Changed 1% to 5% in last sentence to agree with “Gamma Thermometer System for LPRM Calibration and Power Shape Monitoring” LTR.
106.	S7.7.6.2.1.3, 1 st sent	Changed “Instrumentation and Control Panel Supply” to “Instrumentation and Control Power Supply” for correctness.
107.	S7.7.6.2.2.1, 1 st para, 2 nd sent	Inserted sentence previously located in 2 nd para, 7 th sentence for readability.
108.	S7.7.6.2.2.1, 1 st para, 3 rd sent	Replaced “and MLHGR do not violate fuel thermal safety limits” with “does not violate fuel thermal limits or exceed MLHGR limitations” because MLHGR has limitations and not limits.
109.	S7.7.6.3.1	<ul style="list-style-type: none"> • Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems. • Inserted “Conformance:” to conformance statements for consistency.
110.	S7.7.6.3.3	<ul style="list-style-type: none"> • Divided conformance statement for RG 1.180 and 1.204 into individual conformance statements for each. • Deleted “as discussed in Subsection 7.1.6.” from RGs 1.180 / 1.204 conformance statement in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
111.	S7.7.6.5.1, 2 nd para	Rearranged final sentence for readability.
112.	S7.7.6.5.2, 2 nd para	Rearranged final sentence for readability.
113.	S7.7.7.1	Replaced “9.4.9” with “6.2.5.2.1” as it is a better reference.
114.	S7.7.7.2	Replaced “9.4.9.2” with “6.2.5.2” as it is a better reference.
115.	S7.7.7.3, 1 st para	Replaced “is nonsafety-related except for the containment isolation function. Failure of the nonsafety-related components does not adversely affect any safety-related system. Refer to Subsections 6.2.4 and 9.4.9” with “safety evaluation is discussed in Subsection 6.2.5.2.3” for brevity and clarity.

116.	S7.7.7.3.1, 1 st para	Added 10 CFR 50.55a(a)(1) with conformance statement since it is applicable to all ESBWR systems.
117.	S7.7.7.3.2	Reworded 1 st & 2 nd sentence of Conformance statement for clarity.
118.	S7.7.7.3.3, 1 st para	<ul style="list-style-type: none"> • Revised this paragraph to create a conformance statement consistent with other conformance statements. <ul style="list-style-type: none"> – Deleted “There are no RGs other than RG 1.180 and RG 1.204 directly applicable to the nonsafety-related CIS” as unnecessary. – Added “RG 1.151, Instrument Sensing Lines:” for consistency. – Replaced “However” with “Conformance:” for consistency. – Replaced “meet the requirements of RG 1.11 and RG 1.151” with “comply with the guidance of RG 1.151.” Removed RG 1.11 since SRP Table 7-1 does not list RG 1.11 as an applicable document. • Deleted “as discussed in Subsection 7.1.6.4” from RGs 1.180 and 1.204 conformance statements in an effort to remove inconsistencies with how references to Subsection 7.1.6 are handled in safety evaluation subsections.
119.	S7.7.7.5.1, 1 st para	<ul style="list-style-type: none"> • Rearranged second sentence for better readability. • Inserted “-heated” into 3rd sentence to use correct terminology.
120.	S7.7.7.5.1, 2 nd para, 2 nd sent	<ul style="list-style-type: none"> • Inserted “nitrogen” to more fully describe the makeup process. • Rearranged sentence for readability
121.	S7.7.7.5.1, last para	Changed reference to 6.2-29 for accuracy.
122.	S7.7.7.5.2, 1 st para, 2 nd sent	Inserted “nitrogen” to more full describe the makeup process.
123.	S7.7.7.5.2, 2 nd para	Inserted “Drywell temperatures are provided directly to the LD&IS” as pertinent information.
124.	S7.7.7.5.2, last para	Replaced “Section 9.4” with “Section 6.2.5.2” for accuracy.
125.	S7.7.7.5.3, 8 th bullet	Replaced “Keylock switch” with “Disable switch” to remove confusion over the term “keylock switch”.
126.	S7.7.9	<ul style="list-style-type: none"> • Revised reference 7.7-1 according to MFN 07-500. • Deleted Reference 7.7-2 (Rev 4) as it was no longer called out in the text. • Added Reference 7.7-3 as required by section text.

127.	T 7.7-1	Deleted notes and replaced them with “CR-Control Rod” as required by the table.
128.	F 7.7-1	Updated figure to remove outdated terminology (Level 1.5)
129.	F 7.7-3	Updated figure to include FTDCs.
130.	F7.7-7	Added figure to better explain feedwater heater temperature control.

TIER 2 SECTION 7.8 REVISION 4 TO REVISION 5 CHANGE LIST

Item	Location (e.g., subsection with paragraph/sentence/item, table with column/row, or figure)	Description of Change
1.	S7.8.1, 6 th para,	<ul style="list-style-type: none"> • Replaced “Feedwater Control System (FWCS)” with “Condensate and Feedwater System (C&FS)” in 3rd bullet for clarity. • Added “Selected Control Rod Run-in (SCRRI) command to Rod Control and Information System (RC&IS);” as additional bullet (9th) to clarify SCRRI/SRI function of DPS to show SCRRI signal path from DPS to RC&IS. • Added “with every SCRRI action; and” to 10th bullet to SRI function to clarify SCRRI/SRI function of DPS.
2.	S7.8.1.1, 1 st sent	Replaced “The following ATWS mitigation functions that use control logics” with “The ATWS mitigation control functions” for clarity.
3.	S7.8.1.1.1.2 (7.8.1.1.2 Rev 4)	Changed "7.8.1.1.2" to "7.8.1.1.1.2" to support the addition of section 7.8.1.2.3 to describe the separate ADS inhibit functions of DPS and ATWS/SLC. This affected the numbering of the following few subsections. These changes are noted by parentheses in the “Location” column.
4.	S7.8.1.1.1.2 (7.8.1.1.2 Rev 4) 1 st para	Deleted first sentence (Rev 4) and revised second sentence as committed in Response to RAI 14.3-188 via MFN 08-086 S15.
5.	S7.8.1.1.1.2 (7.8.1.1.2 Rev 4) 2 nd para	Replaced “switches” with “controls” for accuracy.
6.	S7.8.1.1.2, 1 st bullet (S7.8.1.1.3 Rev 4)	Added “dome pressure” and “(Level 2)” to first bullet to clarify signals used for ARI ATWS Mitigation Logic.
7.	S7.8.1.1.2, 2 nd bullet (S7.8.1.1.3 Rev 4)	Replaced “RPS” with “DPS” to second bullet for completeness, because “DPS scram command” includes RPS scram command as described by Subsection 7.8.1.1.4.

8.	S7.8.1.1.2, 1 st para, 3 rd bullet (Rev 4)	Deleted bullet “SCRRI/SRI command and power levels remaining elevated;” because it is already part of DPS scram command listed in Subsection 7.8.1.1.4.
9.	S7.8.1.1.2, 1 st para, 4 th bullet	Added “rods” for clarity.
10.	S7.8.1.1.3 (S7.8.1.1.4 Rev 4)	Removed “Scram and” and “ ATWS Mitigation” from Subsection heading as part of an effort to clarify and separate descriptions of DPS SCRRI/SRI and DPS Scram, which were previously combined in one subsection.
11.	S7.8.1.1.3 (S7.8.1.1.4 Rev 4)	<ul style="list-style-type: none"> • Converted last paragraph (Rev 4) to a bulleted list and coupled the SCRRI signal with the SRI signal to remove the implication that the SRI signal was independent of the SCRRI signal. Detail was added to show the DPS commands RC&IS to perform a SCRRI function when DPS determines that SCRRI/SRI is required. • Added 1st and 2nd bullets to relocate TGCS inputs to the SCRRI/SRI function to a more appropriate location. This was described in Subsection 7.1.5.2.3.10 of DCD Tier 2, Rev 4. • Added 3rd – 5th bullets as committed in Response to RAI 4.3-12 via MFN 08-313 (with minor editorial changes for consistency with DCD). • Added 6th bullet to relocate the NMS OPRM signal from the last paragraph of 7.8.1.1.4 of DCD Tier 2, Rev 4.
12.	S7.8.1.1.4	<ul style="list-style-type: none"> • Inserted new subsection heading “DPS Scram ATWS Mitigation Logic” which received text from the previous subsection as part of an effort to clarify and separate descriptions of DPS SCRRI/SRI and DPS Scram, which were previously combined in one subsection. • Moved text previously found beneath 2nd bullet to Subsection 7.8.1.1.3 bullets.
13.	S7.8.1.2.1, last sentence	Replaced “the DPS VDU” with “DPS displays” because DPS displays are on the N-DCIS VDUs.
14.	S7.8.1.2.2, 2 nd para, 1 st sent	Replaced “ECCS” with “GDCS” for increased precision.
15.	S7.8.1.2.2, 5 th para,	Replaced “Redundant output drivers” with “Series discrete switches” in 5 th sentence and “both output drivers” with “all series output switches” in 6 th sentence due to addition of a third series load driver for ECCS squib valves.

16.	S7.8.1.2.2, 9 th para, 4 th sent	Replaced “logic has a dual redundant logic path that requires two” with “logic requires three” due to addition of a third series load driver for ECCS scuib valves.
17.	S7.8.1.2.3	Inserted new section heading and text as committed in Response to RAI 14.3-188 via MFN 08-086 S15 with minor editorial changes.
18.	S7.8.1.2.4	Inserted new section heading for clarification as committed in Response to RAI 14.3-188 via MFN 08-086 S15.
19.	S7.8.1.2.4, 1 st para, 2 nd bullet (Rev 4)	Deleted this bullet with text “Closure of the ICS isolation valves on high steam flow or excessive condensate flow” because of removal of the DPS from the ICS isolation function.
20.	S7.8.1.2.4, 1 st para, 4 th bullet	Replaced “FWCS” with “feedwater lines” for consistency with DCD Subsection 7.3.3.2.
21.	S7.8.1.2.5	Inserted new section heading for clarification as committed in Response to RAI 14.3-188 via MFN 08-086 S15.
22.	S7.8.1.2.5, 1 st para, 1 st bullet	Added “high RPV dome pressure,” for completeness.
23.	S7.8.1.2.5, 1 st para, 2 nd bullet	Replaced “The DPS runs back the feedwater pumps on high RPV water level (Level 8). If the water level continues to increase, the DPS trips the feedwater pumps (Level 9).” with “The DPS trips the feedwater pumps on high RPV water level (Level 9).” because DPS feedwater runback is not part of DPS scope.
24.	S7.8.1.2.5, 1 st para, 3 rd bullet	Added bullet “The DPS opens equalizing valves between the equipment storage pool and the IC/PCC expansion pools when a low level condition is detected in either of the IC/PCC expansion pools” to meet both design goals and NRC safety goals.
25.	S7.8.3, 2 nd para, 4 th sent	Inserted “fission product” before “barrier isolation” for clarity.
26.	S7.8.3.1, 1 st para	Replaced “10 CFR 55a(a)(1), Quality Standards” with “10 CFR 50.55a(a)(1), Quality Standards for Systems Important to Safety” for correctness and consistency with other DCD subsections.

27.	S7.8.3.1, 2 nd bullet, 1 st para, 2 nd & 3 rd sent	Replaced “The transmission of signals between the divisional equipment of protection system (that is, RPS and SSLC/ESF) or between the ATWS/SLC. The transmission of signals between the equipment of the protection systems or between the equipment of ATWS/SLC” with “Q-DCIS inter-divisional and cross-platform signal transmission is performed via fiber optic cables. Signal transmission between the systems of the Q-DCIS” for clarity.
28.	S7.8.3.1, 2 nd bullet, 1 st para, last sent	Replaced “The electrical to optical interface” with “The safety-related fiber optic CIM” for consistency with Subsection 7.1.3.3.
29.	S7.8.3.1, 2 nd bullet, 2 nd para,	Replaced “where the diverse I&C equipment is located” with “at their locations” for readability.
30.	S7.8.3.1, 3 rd bullet	Added conformance to 10CFR 50.34(f)(2)(v)(I.D.3) with conformance statement as it is applicable to the ATWS/SLC System.
31.	S7.8.3.4,	<ul style="list-style-type: none"> • Added conformance statements for Reg. Guides 1.47 and 1.53 as they are applicable to the ATWS/SLC System. • Added RG 1.89 and RG 1.209 with conformance statements consistent with the intent of RAI 7.1-47 (MFN 07-505), as they are applicable to the ATWS/SLC System. • Added RG 1.100 with conformance statement for consistency with Subsection 7.1.6.6.1.5. • Replaced “conforms to the guidance in RG 1.105. This RG is not applicable to the nonsafety-related DPS” with “setpoints are consistent with this guide. The guidance in RG 1.105 is also applied to any portions of the nonsafety-related DPS used for maintaining design limits described in the Technical Specifications. Reference 7.8-4 provides a detailed description of the GEH setpoint methodology” in 4th bullet consistent with the intent of RAIs 16.2-146 & 16.2-149 via MFN 07-536. • Replaced “This RG is not applicable to the nonsafety-related DPS” with “Sections of endorsed standard ANSI/ISA-S67.02.01 on design practices for tubing, vents, and drains also apply to sensing lines that support DPS” in accordance with NRC Generic Letter 2008-01.
32.	S7.8.3.5	Inserted text “that conforms to BTP HICB-19” to conformance statement to BPT HICB 19 for completeness.

33.	S7.8.7	<ul style="list-style-type: none"> • Updated revision number to reference 7.8-1 to reflect the latest revision number. • Inserted reference 7.8-4 as required by the text.
34.	F7.8-1	Revised figure as committed in Response to RAI 14.3-263 via MFN 08-086 Supp 21 and to remove DPS from the ICS isolation function.
35.	F7.8-2	Figure modified to make it consistent with Section 7.8.
36.	F7.8-4	Revised figure to reflect updated triple modular redundant design details on signal processing, and to address the addition of a third series load driver/discrete output switch for ECCS squib valves.

**TIER 2 SECTION 7.9, APPENDIX 7A, AND APPENDIX 7B REVISION 4 TO REVISION 5
CHANGE LIST**

1.	S7.9	Replaced section heading and text with “(DELETED)” for consistency with other deletions.
2.	App 7A	Replaced appendix heading with “(DELETED)” for consistency with other deletions.
3.	App 7B	<ul style="list-style-type: none">• Replaced section heading and text with “(DELETED)” for consistency with other deletions. This action was performed after Response to RAI 7.1-75 via MFN 08-168 which provided a markup for the text in this appendix.• Removed titles from deleted tables for consistency with other deletions.