

DCD Chapter 7 Rev. 2
Revision 1 to Revision 2 Change List

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
1.	Cover Sheet	Updated date and Rev #.
2.	All pages (headers)	Changed “Rev. 1” to “Rev. 2”.
3.	7.1	Reformatted in accordance to DCD Writers Guide including use of present tense, added subsection labels, use of safety-related and nonsafety-related terms and singularity and plurality of verbs to allow easier reference and readability. Change of “Regulatory Guide” to “RG” and “Std” to “Std.” in an effort to improve uniformity.
4.	S7.1.1.1	Reworded para. one to present tense to reflect current system design. Also reworded 2 nd sentence for clarity.
5.	S7.1.1.1	Last para. added word “platform” to second sentence to better describe design diversity basis.
6.	S7.1.1.2	Editorial change. Added “and” to 3 rd sentence.
7.	S7.1.1.2.1	Paras. 2, 3 and 4; 5 and 6; 8, 9, 10 and 11 broken down for readability.
8.	S7.1.1.2.1	Paras. 3 and 8 revised to remove previously defined acronyms for RMU, CIM and VDU. Para. 3 revised to reflect combination of DTM and TLU into one unit called DTLU, Digital Trip Logic Unit.
9.	S7.1.1.5.4	Par. revised to better describe the FAPCS alignment in the LPCI mode of operation.
10.	S7.1.1.8.3	Word “triplicate” replaced with “triple” to better describe hardware platform configuration. Changed throughout document. Modified 2 nd sentence to include all modes of operation.
11.	S7.1.1.8.6	3 rd sentence revised to better describe control rod block interface with RCIS.
12.	S7.1.2.1.1	Added period to 4 th sentence.
13.	S7.1.2.1.3	Removed space in front of last sentence.
14.	S7.1.2.2.1	Changed “C&I” to “I&C”.
15.	S7.1.2.2.3	21 st –26 th Paras.: changed to reflect the issued status of DG 1130. Compliance to RG 1.152/IEEE Std. 7-4.3.2-2003

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		replaces DG 1130.
16.	S7.1.2.3.3	7 th – 10 Paras. Revised to reflect addition of COL Applicant required actions related to Temperature and Humidity, Pressure, Radiation and Seismic level confirmations.
17.	S7.1.2.3.3	17 th Par. “Information Displays,” revised to reflect release of RG 1.97 Rev. 4. type A variables will be determined in accordance with HFE process described in S7.5.1.2 and Chapter 18.
18.	S7.1.2.3.3	Last para.: editorial correction to “Defense-in-Depth” term.
19.	S7.1.3	COL information added to include action required of COL applicant.
20.	R7.1-3	Removed Proprietary document reference.
21.	T7.1-2	Revised PAM column to reflect removal of referenced table 7.5.1.
22.	S7.2.1.1 1 st sentence	Replaced ‘functional requirements’ to ‘safety-related design bases’.
23.	S7.2.1.1 sufficient reliability (5)	Rewritten for clarification on control rod insertion.
24.	S7.2.1.1 operator error (5)	Revised for clarification on operation of reactor mode switch.
25.	S7.2.1.2.1	Editorial Change
26.	S7.2.1.2.3	Added for correct power source.
27.	S7.2.1.2.4	Editorial Changes
28.	S7.2.1.2.4.1 Sensor Channels	Replaced DTM and TLU with DTLU. Removed DTM and TLU descriptions.
29.	S7.2.1.2.4.1 Division of Trip Logic	Replaced DTM and TLU with DTLU. Added DTLU functional description.
30.	S7.2.1.2.4.1 Division of Trip Actuators	Added DTLU function Removed relays and added controller functions.
31.	S7.2.1.2.4.1 Division of Scram Logic Circuitry	Revised for correct power source.
32.	S7.2.1.2.4.2	Replaced DTM and/or TLU with DTLU. Removed DTM and TLU. Revised Manual Scram and Reset Logic para. for clarification.

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33.	S7.2.1.2.4.3 displays	Added Main Condenser Pressure.
34.	S7.2.1.2.4.3 Alarms	Revised for channel and division, Changed TLU to DTLU.
35.	S7.2.1.2.4.3 ICS	Added logic for ICS initiation on loss of power generation bus signal.
36.	S7.2.1.2.4.3 UPS	Added 'pair of'.
37.	S7.2.1.2.4.3 ICP	Deleted para. for ESBWR passive plant.
38.	S7.2.1.3 BTP HICB-13	Deleted sentence for clarification.
39.	S7.2.1.4	Replaced DTM and/or TLU with DTLU. Removed DTM and TLU.
40.	S7.2.1.5.2	Added sentence for bypass alarm / indication in the main control room. Replaced DTM and/or TLU with DTLU. Removed DTM and TLU. Editorial changes.
41.	S7.2.2.1.1 – 1 st Sentence	Added "safety-related" (editorial).
42.	S7.2.2.1.1 - In Non-safety-related Design Bases, 2 nd sentence	Added "nonsafety-related" (editorial).
43.	S7.2.2.1.1 - In Non-safety-related Design Bases, 3 rd bullet	Added "approximately" in two places (editorial).
44.	S7.2.2.1.2 - 1 st Sentence	Added "safety-related" (editorial).
45.	S7.2.2.1.2 - In Non-safety-related Design Bases, 1 st sentence	Added "nonsafety-related" (editorial).
46.	S7.2.2.1.2 - In Non-safety-related Design Bases, 4 th bullet	Revised "RCIS" to "RC&IS" (editorial).
47.	S7.2.2.1.3 - 1 st Sentence -	Added "safety-related" (editorial).
48.	S7.2.2.1.3 - In Non-safety-related Design Bases, 1 st sentence	Added "nonsafety-related" (editorial).
49.	S7.2.2.1.3 - In Non-safety-related Design Bases, 4 th bullet	Revised "continuous" to "continuously available" (editorial).

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50.	S7.2.2.1.4 - 1 st Sentence	Added "safety-related" (editorial).
51.	S7.2.2.2 - In System Identification, 2 nd sentence	Revise end of sentence to read "(RC&IS) for control of rod block monitoring" (editorial).
52.	S7.2.2.2.1 - In General Description, 1 st sentence	Added "approximately" in two places (editorial).
53.	S7.2.2.2.1 - In Power Sources, last sentence	Revised sentence to read "powered with two uninterruptible divisional 120 VAC power sources from the appropriate division;".
54.	S7.2.2.2.1 - In Physical Arrangement, 1 st sentence	Added "a" (editorial).
55.	S7.2.2.2.1 - In Physical Arrangement, 4 th sentence	Revised "separate" to separately" (editorial).
56.	S7.2.2.2.1 - In Physical Arrangement, 8 th sentence	Revised to read "This SRNM divisional trip is sent to the RPS via a safety-related network interface."
57.	S7.2.2.2.1 - In Physical Arrangement, 10 th sentence	Sentence deleted.
58.	S7.2.2.2.1 - In Signal Processing, 1 st sentence	Added "approximately" (editorial).
59.	S7.2.2.2.1 - In Trip Functions, last sentence -	Revised sentence to read "reactor scram (due to a shorter reactor period" (editorial).
60.	S7.2.2.2.2 - In Uninterruptible Power Supply (UPS), 1 st sentence	Sentence revised to read "Alternating current power for the LPRM circuitry is supplied by four pairs of divisional 120 VAC UPS buses (A, B, C and D) that correspond to the four safety-related divisions[SMS1];"
61.	S7.2.2.2.2 - In Uninterruptible Power Supply (UPS), 2 nd sentence	Removed "approximately" (editorial).
62.	S7.2.2.2.2 - In Signal Processing, 1 st sentence	Added "the" (editorial).

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
63.	S7.2.2.2.2 - In Bypasses and Interlocks, 2 nd sentence -	Added "channel" (editorial).
64.	S7.2.2.2.2 - In Environmental Considerations, 1 st sentence	Added "approximately" in two places (editorial).
65.	S7.2.2.2.3 - In Power Sources, all bullets	Added "Redundant".
66.	S7.2.2.2.3 - In Power Sources, below bullets	First sentence now reads, "Either of the two redundant power sources will support APRM operation."
67.	S7.2.2.2.3 - In Signal Conditioning	Removed 6 th sentence.
68.	S7.2.2.2.3 - In Signal Conditioning, 7 th sentence	Sentence now reads "Individual APRM channel trips are routed to the RPS directly."
69.	S7.2.2.2.3 - In Trip Function, last sentence	Last sentence deleted.
70.	S7.2.2.2.3 - In Bypasses and Interlocks, 3 rd sentence	Changed "to" to "in" (editorial).
71.	S7.2.2.2.3 - In Bypasses and Interlocks, 2 nd para., 3rd sentence	Removed "by a light" from the sentence.
72.	S7.2.2.2.3 - In Bypasses and Interlocks	Added 3 rd para..
73.	S7.2.2.2.3 - In Redundancy	Removed 2 nd sentence.
74.	S7.2.2.3.1 - In Startup Range Neutron Monitor, first sentence	Sentence revised to read "generates [SMS2]trip signals to prevent fuel damage".
75.	S7.2.2.3.1 - In Startup Range Neutron Monitor, 2nd sentence	Sentence revised to read "(i.e., short reactor period)".

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76.	S7.2.2.3.2 - In 10CFR 50.55(h), first para., last sentence	Last sentence removed.
77.	S.2.2.3.2 - In 10CFR 50.55(h), third para., 5 th sentence	"The" changed to "that".
78.	S7.2.2.3.2 - In Regulatory Guides (RGs)	RG 1.97 added as a reference.
79.	S7.2.2.3.2 - In Branch Technical Positions (BTPs)	HICB-10 added as reference.
80.	S7.2.2.4.2 - In APRM Testability and Calibration, 1st sentence	Sentence now reads "APRM channels are calibrated using data from the Plant computer function reactor heat balance calculation."
81.	Table 7.1-1	Added "X" to HICB-10 column for Neutron Monitoring and Suppression Pool Temperature Monitor Function.
82.	Table 7.2-1 - second row	Remove "(12 Sensors)" from table (editorial).
83.	Table 7.2-2	Add brackets "[]" around all values to support Note 1 (editorial).
84.	Table 7.2-2 - Last row	Corrected "SSLC" (editorial).
85.	Table 7.2-3	Add brackets "[]" around all values to support Note 1 (editorial).
86.	Table 7.2-3	Added row for "APRM ADS Permissive".
87.	Figure 7.2-1	Revised for DTLU. Replaced DTM and/or TLU with DTLU. Removed DTM and TLU.
88.	Figure 7.2-2	Added RMU in the box.
89.	Figure 7.2-3	Revised Figure to remove arrows from four bars (editorial).
90.	Figure 7.2-4	Revised Figure to remove 2/4 Voting function.
91.	Figure 7.2-5	Revised Figure to remove 2/4 Voting function.
92.	Figure 7.2-8	Revised to change "Gamma Thermometer" to "AFIP Sensor" and to show representations of three more AFIP sensors.
93.	S7.2.3	General change - revised "S/P" to "Suppression Pool" throughout Section (editorial).

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94.	S7.2.3.2 - In Power Sources	Revised sentence to read, "The suppression pool temperature monitoring hardware is redundantly powered by the appropriate divisional uninterruptible AC [SMS3]power sources, either of which can support the SPTM function.
95.	S7.2.3.2 - In Equipment Design	Added second bullet, "Provides sixteen temperature sensors for use by the diverse protection system (DPS)".
96.	S7.2.3.2 - In Equipment Design - last sentence	Revised last sentence to read, "The temperature sensor wiring from the wetwell junction boxes is directed through the suppression pool divisional instrument penetrations to the four-divisional Essential Distributed Control and Information System (E-DCIS) and the DPS RMUs."
97.	S7.2.3.3.1 - In General Functional Requirements Conformance, 2 nd para.	Para. revised to read "Suppression pool temperature monitoring also provides Class 1E inputs to the Main Control Room for indication, provides input for nonsafety-related suppression pool automatic cooling mode initiation, and information for display, alarm and recording and inputs to the DPS."
98.	S7.2.3.3.2 - In Specific Regulatory Requirements Conformance, under Regulatory Guides (RGs),	RG 1.97 added as a reference.
99.	S7.2.3.3.2 - In Specific Regulatory Requirements Conformance, under Branch Technical Positions (BTPs),	HICB-10 added as reference.
100.	Table 7.2-4	Added second row for "Sixteen suppression pool local temperature signals to the DPS RMU".
101.	S7.3 various paras.	Replaced the term "channel" with "train".
102.	S7.3 various paras.	Removed all references to Rx Level 1.5.
103.	S7.3 various paras.	Various editorial comments, change "shall" to "will".
104.	S7.3.1	Inserted description of Emergency Core Cooling System.
105.	S7.3.1.1	Inserted description of Automatic Depressurization System.
106.	S7.3.1.1.1	Revised Safety Design Basis as follows: remove "Detect containment drywell high pressure", revise bullet describing

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		automatic actuation of SRVs and DPVs to actuate after Rx Level 1 is reached, not on Rx level 1.5 and high drywell pressure.
107.	S7.3.1.1.2	Revised summary description to clarify the description of the ADS System and remove references to drywell pressure and Rx Level 1.5. Within the Logic and sequencing bullet, revise to state that each SRV and DPV is connected to 3 divisions of power instead of 2. This to reflect the N-2 changes. Also within the Logic and sequencing bullet, revise the description for the manual operation of the SRVs and the DPVs. Within the Supporting Systems bullet, add “safety-related 120 VAC” as a power supply for the SRVs and the DPVs.
108.	S7.3.1.2	Para. added to describe the location of components within the GDSC System.
109.	S7.3.1.2.1	Added statement “Prevent the inadvertent actuation of the deluge valves thus preventing the inadvertent draining of the GDSC pools” to the Safety Design Bases.
110.	S7.3.1.2.2	The System Description is essentially re-written in its entirety to reflect the changes listed above.
111.	S7.3.1.2.3.4, 5 th bullet	Add statement to clarify the portion of GDSC being discussed.
112.	S7.7.4.2 2nd para.	Editorial clarification.
113.	S7.7.5.2 Operational Considerations, 2 nd para.	Editorial clarification.
114.	S7.7.5.2 Operational Considerations, 4 th para.	Added detail.
115.	S7.7.5.3 1 st para.	Added SB&PC equipment location.
116.	S7.7.5.6	Removed sections RC&IS and FWCS because reactor dome pressure signals are provided by NBS rather than SB&PC.
117.	S7.7.5.6 Plant Automation System, 7 th bullet	Deleted. Dome pressure signals are not provided to PAS by SB&PC.
118.	S7.7.5.6.1 Main Turbine and Turbine Control subsystems	Editorial. Combined these subsections under Turbine Control system subsection and removed the Main Turbine subsection.

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119.	S7.7.6.2 AFIP General Description	Removed references to gamma thermometers and described as a more generic AFIP sensor.
120.	7.7.9 References	Deleted Reference 7.7-1 dealing with gamma thermometers.
121.	T7.7-1	Changed Title.
122.	F7.7-1	Removed L1.5 from figure.
123.	F7.7-4	Revised to show that all PAS communication is done through C62.
124.	S7.4 3 rd sentence	Added "SLCS to systems listed.
125.	S7.4.1	Deleted para., as per response to RAI 9.3-4.
126.	S7.4.1.2	Rewrote section to clarify SLC design Requirements for ECCS Actuation and ATWS Mitigation Functions. Deleted reference to non-microprocessor based.
127.	S7.4.1.2.1	Rewrote section to provide additional information on power sources. Added information on DPS and modified power assignments to valves. (N-2 modification). Removed reference to 250 VDC and added reference to DCD section 8.3.1.1.3.
128.	S7.4.1.2.2 2 nd para.	Relocated this information (was in third para.).
129.	S7.4.1.3	Formatting changes.
130.	S7.4.2.2.1	Deleted first three paras. and replaced with material listed below.
131.	S7.4.2.2.1 1 st para.	Added para. and bullets, which describe major components on remote shutdown panels.
132.	S7.4.2.2.1 2 nd para. (old)	Deleted para., content similar to para. two paras. below.
133.	S7.4.2.2.1 2 nd para. (new)	Added material discussing display and control functions available on the Remote Shutdown Panels and added reference to Fig 7.4-1.
134.	S7.4.2.2.1 3 rd para.	Added material discussing RSS panel location, fire doors, environment, and access.
135.	S7.4.2.2.2 3 rd bullet	Rewrote for clarity and deleted reference to RRS logic input power breakers.
136.	S7.4.2.2.2 3 rd bullet	Deleted, replaced with information below.

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137.	S7.4.2.2.2 5 th bullet	Added information on MSIV isolation switches on the RSS.
138.	S7.4.2.2.3 2 nd sentence	Deleted information on manual transfer displays, as RSS displays are always available.
139.	S7.4.2.2.3 2 nd para.	Rewritten for clarity, and deleted last sentence as it is redundant information.
140.	S7.4.2.2.4 3 rd para.	Para. rewritten for clarity.
141.	S7.4.2.2.4 4 th para.	Para. deleted, extraneous information.
142.	S7.4.2.3	Formatting changes.
143.	S7.4.2.5	Edited for consistency with information added in sections above.
144.	S7.4.3	Formatting Changes.
145.	S7.4.4.3 2 nd para. fourth sentence	Changed “on a different...” to “on two different...”. Changed “than that for...” to “than the two divisional power sources for...”. Changes associated with N-2 modification. Removed reference to 250 VDC and added reference to DCD section 8.3.1.1.3.
146.	S7.4.4.3 2 nd para. 6 th sentence	Changed “An IC loop...” to “An IC Train...”. Changed “One of two...” to “One of three...”. Changed “each of the four IC loops is started using a different.” To “each of the four IC trains has three of the four...”. These changes are associated with the N-2 modification to the ICS.
147.	S7.4.4.3 3 rd para.	Corrected information to agree with design specification for ICS. (26A6629 R1 Sections 4.3.3, 4.5.2).
148.	S7.4.4.3 5 th para. (new)	Added reference to DCD section 7.8 for DPS inputs to ICS.
149.	S7.4.4.3.1	Formatting changes.
150.	S7.4.4.5	Formatting changes.
151.	Table 7.4-1 Title	Changed title from “Remote Shutdown System Interface” to “Remote Shutdown System Major Interfaces”.

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152.	Table 7.4-1 RWCU/SDC System	List revised based on markup provided by RWCU/SDC I&C responsible engineer.
153.	Table 7.4-1 Control Rod Drive System (CRD)	List revised to agree with RSS Design Specification 26A6680 Rev 0 Section 4.4.3.
154.	Table 7.4-1 RCCW System	List revised to agree with RSS Design Specification 26A6680 Rev 0 Section 4.4.8.
155.	Table 7.4-1 PSW System	List revised to agree with RSS Design Specification 26A6680 Rev 0 Section 4.4.9.
156.	Table 7.4-1 Electrical Power distribution System	List revised to agree with RSS Design Specification 26A6680 Rev 0 Section 4.4.10. Breaker capacity for items 1 and 2 are not included as values are not relevant for this table.
157.	Table 7.4-1 Nuclear Boiler System	List revised to agree with RSS Design Specification 26A6680 Rev 0 Section 4.4.1.
158.	Table 7.4-1	Added Section for Isolation Condenser System (ICS) in accordance with RSS Design Specification 26A6680 Rev 0 Section 4.4.2.
159.	Table 7.4-1	Added Section for Gravity Driven Cooling System (GDCCS) in accordance with RSS Design Specification 26A6680 Rev 0 Section 4.4.6.
160.	Table 7.4-1	Added Section for Containment Monitoring System (CMS) in accordance with RSS Design Specification 26A6680 Rev 0 Section 4.4.11.
161.	Figure 7.4-1	Changed “Safety VDU” to “2 Safety VDUs”. Changed “one of two divisions” to “one of two remote shutdown panels”.
162.	Figure 7.4-2	Changed font size on figures to make all text visible. Changed Div 1, 2, 3, 4 to Div I, II, III, IV for consistency.
163.	Figure 7.4-3	Revised figure to show control of typical ICS condensate return path for N-2 modification and diversity changes.
164.	7.5.1	Replaced “General I&C Conformance to Regulatory Guide 1.97” with “Post Accident Monitoring System”

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165.	7.5.1.1	Added new section “Design Basis” and relocated old 7.5.1.1 “Systems Description” to 7.5.1.2.
166.	7.5.1.2	Deleted old “Post accident Monitoring System” section and replaced with old “System Descriptions” section.
167.	S7.5.1.3	A new “Safety Evaluation” section has been added. This section addresses the items in table 7.1-1 and presents the conformance information in the standardized format used throughout DCD Chapter 7. The Original Section 7.5.1.3 “Systems Analysis-Post Accident Monitoring System” has been deleted.
168.	S7.5.1.4	A new section “Testing and Inspection Requirements” has been added.
169.	S7.5.2	Revised list of instrumentation.
170.		
171.	S.7.5.2.1	Added new material to describe the CMS design basis more completely.
172.	S7.5.2.2	Added new material to the CMS system description, in order to more completely describe the system. Added new material describing the Post Accident Sampling System (Pass).
173.	S7.5.2.3	Formatting Changes Revised information in SECY-93-087 Item II.T section to agree with material in section 7.9. GDC Section Replaced “ <u>3.1.2</u> with <u>3.1.1</u> , <u>3.1.2</u> , <u>3.1.3</u> ”
174.	S7.5.2.4	Formatting Changes
175.	S7.5.2.5	Formatting Changes Deleted Reference to Table 7.5-2 Added a paragraph on the Post Accident Sampling System (PASS).
176.	7.5.3 first paragraph and bullets	Added new paragraph and bullet items as the first paragraph to describe areas where radiation is monitored.
177.	7.5.3 second paragraph and bullets	Deleted bulleted list of PRMS radiation monitors and referenced DCD Section 11.5.1.1.2, which provides a complete list of the PRMS radiation monitors. The deleted

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		list was a partial list and the referenced list is a complete list. Deleted reference to Figure 7.5-2 (which has been deleted) and added a reference to Figure 11.5-1. Reference RAI 7.5-2
178.	7.5.3.1	Formatting changes Revised information in SECY-93-087 Item II.T section to agree with section 7.9. In BTP section Replaced “ <u>Containment Monitoring System</u> ” with “ <u>Process Radiation Monitoring System</u> ” In GDC Section Replaced “ <u>3.1.2</u> with <u>3.1.1, 3.1.2, 3.1.3</u> ”.
179.	7.5.4	Formatting changes
180.	7.5.4.1	In GDC Section Replaced “ <u>3.1.2</u> with <u>3.1.1, 3.1.2, 3.1.3</u> ”
181.	7.5.5	Formatting changes Added reference to Subsections 9.1.3 and 7.2.3 in section 7.5.5.1 Deleted reference to” Category 1 components per RG 1.97” in Sections 7.5.5.2, 7.5.5.3, 7.5.5.4 and 7.5.5.5.
182.	Table 7.5-1	Deleted Table as it contained information derived from RG 1.97 Revision 3 that is no longer applicable to the ESBWR design. RG 1.97 Revision 4 now applies to the ESBWR design. Reference RAI 7.5-3.
183.	Table 7.5-2	Deleted Table as it contained Variable, Type, and Category information developed using RG 1.97 Revision 3. RG 1.97 Revision 4 now applies to the ESBWR design. RG 1.97 Revision 4 no longer contains the prescriptive list of BWR variables that was used as the basis for Table 7.5-2, and does not contain definitions for Categories. The list of variables is to be determined using the information/process in section 7.5.3 under the RG section (RG 1.97 Revision 4). Reference RAI 7.5-3
184.	Table 7.5-3	Deleted Table as it was for “Type A Variables”. The determination of Type A Variables will be determined using the information/process defined in Section 7.5-3 under the

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		RG section (RG 1.97 Revision 4). Reference RAI 7.5-3.
185.	Table 7.5-4 Column 2	First entry in table Replaced “0” with “0%”
186.	Figure 7.5-2	Deleted figure as it was redundant with a similar figure in Chapter 11 (figure 11.5-1). Section 7.5 text now references figure 11.5-1. Reference RAI 7.5-2
187.	S7.6.1.2 1 st para. sent 1	Replaced “ <u>check valve and Motor operated valve</u> ” with “ <u>testable check valve and air operated valve</u> ”
188.	S7.6.1.2.1 1 st para. (later part of para.)	Additional details for pressure transmitter Added interlock function for testable check valve and for LPCI mode selection.
189.	S7.6.1.2.2 1 st para.	Added details for power sources
190.	S7.6.1.2.3 1 st two sent.	Replaced “ <u>Redundant</u> ” with “ <u>Divisionally</u> ” to correctly classify the Pressure transmitters. Location of pressure sensing line indicated.
191.	S7.6.1.2.4	Rewritten the para. to provide details for logic operation from E-DCIS and NE_DCIS
192.	S7.6.1.2.5	Deleted, Repetition of S7.6.1.2.4
193.	S7.6.1.2.7	1 st sent: Added details. Last 2 sent.: Added relief valve availability for leak detection and for pressure relief
194.	S7.6.1.2.8	Added details for N-2 solenoids operation with nonsafety related solenoids
195.	S7.6.1.2.9	Added details explaining the separation of safety-related logic and nonsafety-related logic and safety-related logic and nonsafety related logic implementation in E-DCIS and NE DCIS respectively.
196.	S7.6.1.2.10	Added testable check valve (This is not a new valve).
197.	S7.6.1.2.11	Added environmental details for Non safety related logic and solenoids.
198.	S7.6.1.1.1, 1 st sent	Replaced “ <u>injection valve</u> ” with “ <u>isolation valve</u> ”
199.	S7.6.1.3.3 heading	Corrected the Heading to reflect the CFR abbreviation.
200.	S7.6.1.3.5 5 th para.	Added testability of LPCI Isolation and check valve to

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		indicate that they can only be tested during low pressure condition of reactor pressure.
201.	S7.6.1.4	Added new section “Testing and Inspection Requirements”
202.	S7.6.1.5	Added new section “Instrumentation and Control Requirements”
203.	S7.9, All pages (Headers)	Change “Rev. 1” to Rev. 2”
204.	S7.9	Reformatted in accordance to DCD Writers Guide including use of present tense, added subsection labels, and singularity and plurality of verbs to allow easier reference and readability. Change of “Regulatory Guide” to “RG” and “Std” to “Std.” in an effort to improve uniformity.
205.	S7.9.1.1.1, 3 rd bullet	Added E-DCIS communication to RSS for safety display and control
206.	S7.9.1.1.1, 3 rd bullet	Through out document, video display unit changed to visual display unit, touch screen to VDU and CRT to VDU
207.	S7.9.1.2, para. 4	Reworded sentence for better clarity.
208.	S7.9.1.2, para. 7, 1 st sent	By definition, RMUs are remote to the central DCIS – generic info not subject to change
209.	S7.9.2, para. 9, 8 th sent	Changed: :based on read only memory that cannot be modified by plant personnel” to “such that it is changeable only when the system is removed from service using appropriate configuration controls”
210.	S7.9.1.4, 4 th and 5 th sent	Deleted – Continuous diagnostics sufficient, no requirement for manual communication test identified. Tech Specs will specify system testing requirements.
211.	S7.9.2.1., 8 th bullet, 2 nd level	Reformatted as per DCD Writers Guide
212.	S 7.9.2.1, 8 th bullet, last 2 nd level	NUREG-1 503:07.05.01
213.	S7.9.2.1.2, 11 th bullet, 6 th 2 nd level	Editorial-Deleted and retyped same line.
214.	S7.9.2.1.2, 11 th bullet, 7 th 2 nd level	Replaced “on the large display” with “and/or soft alarms displayed on a video display unit, provided the alarms are both fixed position and redundant”,

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215.	S7.9.2.1.2, 12 th bullet, 1st 2 nd level	Editorial-Deleted and retyped same line.
216.	S7.9.2.1.2, 14 th bullet, 3rd 2 nd level	Replaced Gamma Thermometer with AFIP to provide more options for in-core detector.
217.	S7.9.2.1.2, 29 th bullet	Added Nuclear Data Link (NDL) output to NRC
218.	S7.9.2.2 para. 1	Replaced Nonsafety related data with data to clarify output from E-DCIS
219.	S7.9.2.3.3, 1 st bullet	Deleted Reference to Section 7.5 because contents of 7.5 changed.
220.	S7.9.2.3.3	Changed Annunciator System to Alarm Management System
221.	S7.9.3	Added COL item for NDL
222.	S7.9.4	Added None for References.
223.	7A	Reformatted in accordance to DCD Writers Guide including use of present tense, added subsection labels, and singularity and plurality of verbs to allow easier reference and readability. Change of “Regulatory Guide” to “RG” and “Std” to “Std.” in an effort to improve uniformity.
224.	7A.1.1 1 st para., 2 nd sent	Editorial change from “GT” to “AFIP” as per 7.7.6 to generalize incore detector
225.	7A.1.1 1st para., 3 rd sent	Revision of GT to AFIP to give more flexibility to incore design.
226.	7A.1.1, 4 th para.	Technical clarification based upon revised design details.
227.	7A.1.2, 1 st para., 1 st sent	Editorial to correct content of statement. No technical change.
228.	7A.1.3 1 st para.	Revised to provide flexibility in detail design.
229.	7A.1.4, 1 st para., 2 nd sent	Editorial change from “GT” to “AFIP” to generalize incore detector.
230.	7A.1.5, 1 st para.	Revised to provide flexibility in detail design.
231.	7A.1.6, 1 st para., 1 and 2 nd sent	Revised to provide flexibility in future detail design.
232.	7A.1.6, 2 nd para., 1 st and 2 nd sent	Revised to provide flexibility in future detail design.
233.	7A.1.6, 3 rd para., 1 st and	Revised to provide flexibility in future detail design

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	2 nd sent	
234.	7A.1.6, 4 th para., 1 st , 2 nd and 3 rd sent	Revised to provide flexibility in future detail design.
235.	7A.2 Title	Revised to provide flexibility to incore design.
236.	7A.2.1	Revised to provide flexibility to incore design.
237.	7A.2.1.1, 1 st para.	Revised to provide flexibility to incore design
238.	7A.2.1.1, 2 nd para.	Editorial to correct content of statement. No technical change.
239.	7A.2.1.1, 3 rd para.	Editorial to correct content of statement. No technical change.
240.	7A.2.1.1, 4 th para.	Editorial to correct content of statement. No technical change.
241.	7A.2.1.2	Revised to provide flexibility in design.
242.	7A.2.1.3	Editorial to correct content of statement. No technical change.
243.	7A.2.1.4, 1 st para.	Revised to provide flexibility in design.
244.	7A.2.1.4, 2 nd para.	Revised to provide flexibility in design.
245.	7A.2.2	Revised to provide flexibility in design.
246.	7A.2.2.1, 1 st para.	Revised to provide flexibility in design.
247.	7A.2.2.1, 1 st bullet	Revised to provide flexibility in design.
248.	7A.2.2.1, 2 nd bullet	Revised to provide flexibility in design
249.	7A.2.2.2	Editorial to correct content of statement. No technical change.
250.	7A.2.2.3, 1 st bullet	Editorial to correct content of statement. No technical change.
251.	7A.2.2.3, 2 nd bullet	Editorial to correct content of statement. No technical change.
252.	7A.2.2.3, 5 th bullet	Editorial to correct content of statement. No technical change.
253.	7A.2.2.4, 1 st para.	Editorial to correct content of statement. No technical change.
254.	7A.2.2.4, 1 st bullet	Editorial to correct content of statement. No technical

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
		change.
255.	7A.3	Title revised to provide flexibility in design.
256.	7A.3.1, 1 st para.	Revised to provide flexibility in design.
257.	7A.3.1, 2 nd para.	Revised to provide flexibility in design.
258.	7A.3, 1, 4 th para.	Editorial to correct content of statement. No technical change.
259.	7A.3.2, Title	Revised to provide flexibility in design.
260.	7A.3.2, 1 st para.	Revised to provide flexibility in design.
261.	7A.3.2, 2 nd para.	Editorial to correct content of statement. No technical change.
262.	7A.3.2, 3 rd para.	Revised to provide flexibility in design.
263.	7A.3.2, 4 th para.	Revised to provide flexibility in design.
264.	7A.3.2, 5 th para.	??? (Can't see it)
265.	7A.3.2, 6 th para.	Revision to provide flexibility in design and to reflect correctness of statement.
266.	7A.3.2, 7 th para.	Revised to provide flexibility in design.
267.	7A.3.2, 9 th para.	Revised to provide flexibility in design.
268.	7A.4	Title change to provide flexibility in design.
269.	7A.4.1	Revised to provide flexibility in design.
270.	7A.4.2	Revised to provide flexibility in design.
271.	7A.4.2.	Editorial change to correct content of statement. No technical change.
272.	7A.4.2.1	Editorial change to correct content of statement. No technical change.
273.	7A.4.2.1.1, 1 st , 2 nd , 3 rd , 4 th paras.	Reduction of test case study detail.
274.	7A.4.2.1.2, 1 st and 2 nd paras.	Reduction of test case study detail.
275.	7A.4.2.1.3, 1 st , 2 nd and 3 rd paras.	Reduction of test case study detail.
276.	7A.4.2.1.4, 1 st , 2 nd , 3 rd and	Reduction of test case study detail.

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
	4 th paras.	
277.	7A.4.2.1.1	Inclusion to provide new test case conclusion.
278.	7A.4.2.2.1, 1 st , 2 nd , enumerated items	Reduction of test case study detail.
279.	7A.4.2.2.2, 1 st para., enumerated items	Reduction of test case study detail.
280.	7A.4.2.2.3	Elimination of title.
281.	7A.4.2.2.1, 2 nd and 4 th sent	Reduction of test case study detail.
282.	7A.4.2.2.1, 1 st and 2 nd sent	Reduction of test case study detail.
283.	7A.4.2.2.3, 1 st bullet, 1 para.	Reduction of test case study detail.
284.	7A.4.2.2.3, 1 st bullet, 2 nd para., 1 st sent	Elimination of test case study
285.	7A.4.2.2.4, 1 st , 2 nd , 3 rd , 4 th paras.	Reduction of test case study detail.
286.	7A.4.2.2.6, 1 st and 2 nd paras.	Reduction of test case study detail.
287.	7A.4.2.2.4, 2 nd bullet, 1 st sent	Reduction of test case study detail.
288.	7A.4.2.2.4, 2 nd bullet, 3 rd para., 2 nd , 3 rd , 4 th , and 5 th sent	Reduction of test case study detail.
289.	7A.4.2.2.4, 3 rd bullet, 1 st para., 1 st sent	Reduction of test case study detail.
290.	7A.4.2.2.4, 3 rd bullet, 2 nd para., 1 st sent	Reduction of test case study detail.
291.	7A.4.2.2.4, 3 rd para. and 5 th para.	Reduction of test case study detail.
292.	7A.4.2.2.4, 4 th bullet, 1 st para.	Elimination of test case study
293.	7A.4.2.2.4, 2 nd para.	Reduction of test case study detail.

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
294.	7A.4.2.2.5	Inclusion of new test case conclusion.
295.	7A.4.2.3	Editorial change to correct content of statement. No technical change.
296.	7A.4.2.3.1, 1 st , 2 nd , 3 rd and 4 th para.	Reduction of test case study detail.
297.	7A.4.2.3.2, 1 st , 2 nd , 3 rd and 4 th paras.	Reduction of test case study detail.
298.	7A.4.2.3.3, 2 nd para.	Editorial change to correct content of statement. No technical change.
299.	7A.4.3	Inclusion of new experience to provide flexibility of design detail.
300.	7A.4.3.1	Inclusion of new conclusions to provide flexibility of design detail.
301.	7A.5.1	Revised to provide flexibility in design detail.
302.	7A.5.1, 1 st and 4 th paras.	Revised to provide flexibility in design detail.
303.	7A.5.2, 2 nd and 3 rd paras.	Revised to provide flexibility in design detail.
304.	7A.6, 1 st para.	Eliminated to provide flexibility in design detail.
305.	7A.6, 1 st and 2 nd bullets	Revised to provide flexibility in design detail.
306.	7A.6, 2 nd , 3 rd , 4 th , 5 th , and 6 th paras.	Revised to provide flexibility in design detail.
307.	7A.7, Items 7A-4, 7A-5, 7A-6, 7A-7, 7A-8 and 7A-9	Editorial changes to provide additional references.
308.	7B	Reformatted in accordance to DCD Writers Guide including use of present tense, added subsection labels, and singularity and plurality of verbs to allow easier reference and readability. Change of “Regulatory Guide” to “RG” and “Std” to “Std.” in an effort to improve uniformity.
309.	7B, 1 st para.	Para. addition to clarify hierarchy of Software Plans in conjunction with the Human Factors MMI-HFE Plan
310.	7B 2 nd para.	Editorial changes to eliminate “will be”, “will”, “may be”. No technical changes.
311.	7B 2 nd para.,	Editorial changes to modify sentence to clarify meaning. No technical changes.

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
312.	7B 2 nd para. bulleted items,	Editorial change to define acronyms for Software Plans, to delete Software Test plan, and to add software to those plans missing “software”
313.	7B, 3 rd para.	Editorial changes to modify and clarify content of two sentences. Original sentences not clear.
314.	7B.1 Title	Revised S/W Plan title to change “program” to be “plan”
315.	7B.1, 1 st para., 1 st and 3 rd sentences	Editorial changes to clarify contents of statements. “Program” to “Plan”, delete a References, & add acronyms.
316.	7B.1 1 st bullet, 1 st 2 nd level item	Added independence criteria for separation between SQA and development
317.	7B.1, 8 th bullet	Editorial change to add missing word “that”
318.	7B.2, 3 rd bullet, 2 rd second level item	Editorial change, replace design definition with requirements, replace system with software, delete operation & maintenance manual
319.	7B.2, 3 rd bullet, 4 th second level item	Editorial change to modify title of section to agree with software lifecycle phase Implementation.
320.	7B.2, 3 rd bullet, 5 th second level item	Editorial additions to clarify integration phase activities
321.	7B.2, 3 rd bullet, 6 th second level item	Delete plan (as in test plan)
322.	7B .2, 3 rd bullet, 7 th second level item	Added para. to describe Installation phase.
323.	7B .2, 3 rd bullet, 8 th second level item	Added para. to describe Operation & Maintenance phase
324.	7B.3, Title & 1 st para. & 6 th bullet	Editorial change to delete Project and convert plans to singular and clarify content of para.
325.	7B.4, 1 st para.	Editorial change to add acronym (SCM).
326.	7B.5 Title	Editorial change to correct content of Title (Software added). No technical change.
327.	7B.5, 1 st para.	Editorial change to delete Reference, to make plans singular & to add acronym (SVVP)
328.	7B.5, 1 st bullet, 2 nd para., 1 st 2 nd level	Editorial change to add Software to V&V.

Item	Location (e.g., subsection with para./sentence/item, table with column/row, or figure)	Description of Change
329.	7B.5, 4 th bullet, 2 nd level	Editorial change to clarify management reviews.
330.	7B.7	Editorial change to move selected subsections of Software Test Plan to Software Integration Plan, then delete Software Plan. No technical change.
331.	7B.8 Title, 1 st para., 4 th bullet	Editorial change to correct Title of section, correct title of section as used in 1 st para., corrected acronym (SOMP) and replaced system guide with user manual. No technical change.
332.	7B.9 Title	Editorial change to correct Title of section, correct title of section as used in 1 st para.. No technical change.
333.	7B.9, 1 st para.	Revised to set forth standard acronym (STrngP)
334.	7B.10, Title & 1 st para.	Editorial change to correct Title of section, correct title of section as used in 1 st para., added acronym (SintP). No technical change.
335.	7B.10, 4 th bulleted section	Editorial additions to incorporate selected sections of the Software Plan to clarify Integration Phase Testing. No technical change.
336.	7B.11, Title, 1 st para. & 2 nd second level item	Editorial change to correct Title of section, correct title of section as used in 1 st para., added acronym (SIP) and expanded 1 st 2 nd level item into two 2 nd level items (corrected error in grouping of 2 nd level items). No technical change.
337.	7B. 12, References	Editorial change to delete reference to NEDO 33245 and substitute reference to NEDO 33217
338.	7B.12, References	Editorial change to delete reference to NEDO 33228
339.	7B.12, References	Editorial change to include additional reference to RG 1.172.