ESBWR DCD Tier 2 Chapter 9 Appendix 9A

26A6642BB Revision 5 to Revision 6 Change List

Item	Location	Description of Change
1.	Entire Chapter	Global chapter editorial changes to correct misspelling and grammar, spell out or integrate acronyms where appropriate, and update references as needed and where required.
2.	S9A.2.4, Acceptance Criteria, Item 21	Provided additional guidelines for FHA assumptions associated with spurious actuations in response to RAI 9.5-92.
3.	S9A.2.4, Acceptance Criteria, Item 22	Provided additional acceptance criteria for circuit routing to conform with methodology of NEI 00-01 Rev 1 in response to RAI 9.5-92.
4.	S9A.2.4, Acceptance Criteria, Item 22	Provided document titles for NEI 00-01, Guidance For Post-Fire Safe Shutdown Analysis, and RIS 2005-30, NRC Regulatory Issue Summary 2005-30, Clarification Of Post-Fire Safe-Shutdown Circuit Regulatory Requirements.
5.	S9A.2.6, Redundant Nonsafety-Related Systems and Equipment, 2nd para, 9th bullet	Revised Non-IE DCS system to N-DCIS in agreement with ESBWR Global Acronym List.
6.	T9A.2-1, Fire Protection Codes and Standards	Added NEI 00-01, Guidance For Post-Fire Safe Shutdown Analysis, and RIS 2005-30, NRC Regulatory Issue Summary 2005-30, Clarification Of Post-Fire Safe-Shutdown Circuit Regulatory Requirements to list of Fire Protection Codes and Standards.
7.	F9A.2-1	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve with leader: "Inclined Fuel Transfer Tube Outline" in response to RAI 12.4-19 S03.
8.	F9A.2-2	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve with leader: "Inclined Fuel Transfer Tube Outline" in response to RAI 12.4-19 S03.
9.	F9A.2-2	Removed duplicate “Security Related Information” label block from figure.

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10.	F9A.2-3	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve with leader: "Inclined Fuel Transfer Tube Outline" in response to RAI 12.4-19 S03.
11.	F9A.2-3	Revised to correct building elevation in response to RAI 9.5-91.
12.	F9A.2-4	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve with leader: "Inclined Fuel Transfer Tube Outline" in response to RAI 12.4-19 S03.
13.	F9A.2-5	Added hidden lines to reflect location of missing Access Plug to Trapezoidal Room in Fuel Building in response to RAI 12.4-19 S02.
14.	F9A.2-5	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve in response to RAI 12.4-19 S03.
15.	F9A.2-6	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve in response to RAI 12.4-19 S03.
16.	F9A.2-6	Removed Fuel Building crane rails as unnecessary detail for fire zone drawing.
17.	F9A.2-6	Removed “Not To Be Used for Construction” note block erroneously placed on figure.
18.	F9A.2-7	Added two FW Isolation Valves (FWIV) on two FW lines and changed FWIV configuration. MS Isolation Valves'(MSIV) type changed from Y-type Globe Valves to Gate Valves in response to RAI 5.4-61.
19.	F9A.2-7	Added missing outline of IFTT Room in the Fuel Building boundaries and added plan view on IFTT Sleeve in response to RAI 12.4-19S03.
20.	F9A.2-7	Removed “Not To Be Used for Construction “ note block erroneously placed on figure.
21.	F9A.2-8	Increase RB Upper Pool Gate Walls' thickness from 1300 mm to 1600 mm and move wall between Buffer Pool and IFTS Pool 150 mm to the South in response to RAI 3.8-41S06.
22.	F9A.2-8	Removed “Not To Be Used for Construction “ note block erroneously placed on figure.

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23.	F9A.2-9	Increase RB Upper Pool Gate Walls' thickness from 1300 mm to 1600 mm and move wall between Buffer Pool and IFTS Pool 150 mm to the South in response to RAI 3.8-41S06.
24.	F9A.2-9	Removed “Not To Be Used for Construction” note block erroneously placed on figure
25.	F9A.2-10	Increase RB Upper Pool Gate Walls' thickness from 1300 mm to 1600 mm and move wall between Buffer Pool and IFTS Pool 150 mm to the South in response to RAI 3.8-41 S06.
26.	F9A.2-10	MS Valves' Type change from Y-type Globe to Gate Vales & Configuration of FW Isolation Valves in response to RAI 5.4-61.
27.	F9A.2-10	Move 12 of 200 mm DIA Suppression Chamber Spill-over Holes 500mm up (from EL 12370 to EL 12870) in response to RAI 21.6-103.
28.	F9A.2-10	Added missing IFTT Sleeves in response to RAI 12.4-19 S03.
29.	F9A.2-10	Added clarification phrase “(Rotated View)” on section view of Wetwell Access Hatch in response to RAI 12.4-19 S03.
30.	F9A.2-10	Removed “Not To Be Used for Construction” note block erroneously placed on figure
31.	F9A.2-11	Moved 12 of 200 mm DIA Suppression Chamber Spill-over Holes 500mm up (from EL 12370 to EL 12870) in response to RAI 21.6-103.
32.	F9A.2-11	Moved two vent-openings in the upper pool walls between 18P5C / 18P5A and 18P6C / 18P6A to be consistent with DCD Figure 1.2-8.
33.	F9A.2-16a	Added required “Security Related Information” label block from figure.
34.	F9A.2-20	Change name of RW Room # 6151 from "Low Activity Sludge Phase Separator Room A"to "High Activity Phase Separator Room" to be consistent with DCD Subsection 11.4.2.2.2.

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35.	F9A.2-20	Change name of RW Room # 6161 from "Low Activity Sludge Phase Separator Room B"to "Low Activity Phase Separator Room" to be consistent with DCD Subsection 11.4.2.2.2.
36.	F9A.2-21	Change name of RW Room # 6151 from "Low Activity Sludge Phase Separator Room A" to "High Activity Phase Separator Room" to be consistent with DCD Subsection 11.4.2.2.2.
37.	F9A.2-21	Change name of RW Room # 6161 from "Low Activity Sludge Phase Separator Room B"to "Low Activity Phase Separator Room" to be consistent with DCD Subsection 11.4.2.2.2.
38.	F9A.2-22	Change word "Mobile" to "Processing" in the name of RW Room # 6381 to be consistent with changes made under RAI 11.2-16.
39.	F9A.2-23	Change Abbreviation "EV" to the word "ELEVATOR" in the name of RW Room # 6580. EV is not approved acronym.
40.	F9A.2-24	Change word "Mobile" to "Processing" in the name of RW Room # 6381 to be consistent with changes made under RAI 11.2-16
41.	F9A.2-30	Relocate intake louvers away from TB for dose reduction approved under Engineering Change.
42.	F9A.2-33	EB outline shall be updated as per EB GENERAL AREA DRAWINGS.
43.	F9A.2-33	Updated location of rail line.
44.	F9A.2-33	Added required “Security Related Information” label.
45.	S9A.3.5, Wall Deviations, 3rd para, 2nd sent.	Defined International Conference of Building Officials (ICBO).
46.	S9A.4.1, Reactor Building, 1st para, last sent.	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
47.	S9A.4.2, Fuel Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.

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48.	S9A.4.3, Control Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
49.	S9A.4.4, Turbine Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
50.	S9A.4.5, Radwaste Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
51.	S9A.4.6, Electrical Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
52.	S9A.4.7, Yard, 1st para, 2nd sent	Revised to spell out acronym for Combined License (COL) upon 1st use in Appendix per DCD Writers Guide.
53.	S9A.4.7, Yard, 4th para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
54.	S9A.4.8, Service Building, 1st para, last sent	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
55.	S9A.4.9, SF/WT, 1st para, 2nd sent.	Revised discussion from cold shutdown requirements to safe shutdown requirements for correctness in response to RAI 9.5-83.
56.	S9A.4.9, SF/WT, 1st para, 3rd and 4th sent.	Revised discussion to distinguish separation requirements between redundant nonsafety-related systems versus RTNSS in response to RAI 9.5-83.
57.	S9A.4.9, SF/WT, 2nd para, 2nd sent.	Revised discussion to distinguish separation requirements between redundant nonsafety-related systems versus RTNSS in response to RAI 9.5-83.
58.	S9A.4.10, Ancillary Diesel Building,1st para, 1st sent.	Revised discussion to distinguish separation requirements between redundant nonsafety-related systems versus RTNSS in response to RAI 9.5-83.
59.	S9A.4.10, Ancillary Diesel Building, 1st para, last sent.	Revised discussion from cold shutdown requirements to safe shutdown requirements in response to RAI 9.5-83.

Item	Location	Description of Change
60.	S9A.4.10, Ancillary Diesel Building, 5th para, 2nd thru 4th sent.	Revised discussion of exterior walls and fire barriers in response to RAI 9.5-83.
61.	S9A.4.10, Ancillary Diesel Building , 6th para	Revised subsection 9A.4.10 to delete paragraph that provided the basis for single fire area in response to RAI 9.5-85.
62.	S9A.4.10, Ancillary Diesel Building, 7th para	Revised subsection 9A.4.10 to delete reference to Service Building and correct description of location of manual fire alarm pull boxes in response to RAI 9.5-84.
63.	S9A.4.10, last para. (old)	Deleted last paragraph that provided the basis for single fire area in response to RAI 9.5-85.
64.	S9A.5.9 Service Water/Water Treatment Building, 1st para, 2nd sent.	Revised discussion to distinguish separation requirements between redundant nonsafety-related systems versus RTNSS in response to RAI 9.5-83.
65.	T9A.5-1, Reactor Building, Fire Area F1150	Corrected reactor building Fire Area F1150 Description from NW to NE.
66.	T9A.5-1, Reactor Building, Fire Area F1152	Corrected reactor building Fire Area F1152 Description from NE to SE.
67.	T9A.5-1, Reactor Building, Fire Area F1160	Corrected reactor building Fire Area F1160 Description from SW to NW.
68.	T9A.5-1, Reactor Building, Fire Area F1162	Corrected reactor building Fire Area F1162 Description from SE to SW.
69.	T9A.5-1, Reactor Building, Fire Area F1191	Corrected reactor building Fire Area F1191 Radiological release from “None, no radiological materials present” to “contained within building.” This is RB contaminated stair tower.
70.	T9A.5-1, Reactor Building, Fire Area F1193	Corrected reactor building Fire Area F1193 Radiological release from “None, no radiological materials present” to “contained within building.” This is RB contaminated stair tower.
71.	T9A.5-1, Reactor Building, Fire Area F1195	Corrected reactor building Fire Area F1195 Radiological release from “None, no radiological materials present” to “contained within building.” This is RB contaminated stair tower (interior).

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72.	T9A.5-1, Reactor Building, Fire Area F1196	Corrected reactor building Fire Area F1196 Radiological release from "None, no radiological materials present" to "contained within building." This is RB contaminated stair tower (interior).
73.	T9A.5-1, Reactor Building, Fire Area F1197	Corrected reactor building Fire Area F1197 Radiological release from "None, no radiological materials present" to "contained within building." This is RB contaminated stair tower (interior).
74.	T9A.5-1, Reactor Building, Fire Area F1198	Corrected reactor building Fire Area F1198 Radiological release from "None, no radiological materials present" to "contained within building." This is RB contaminated stair tower (interior).
75.	T9A.5-3, Control Building Fire Area F3110	Corrected Fire Area F3110 Rooms 3251 & 3250 and revised to contain cable insulation and electrical equipment in response to RAI 9.5-86.
76.	T9A.5-3, Control Building Fire Area F3130	Revised rooms containing potential combustibles for Fire Area 3130 to Rooms 3260 and 3261 from Rooms 3160 and 3161in response to RAI 9.5-86.
77.	T9A.5-3, Control Building Fire Area F3301	Revised safe shutdown impact to reflect redundant train B will be operable in response to 9.5-83.
78.	T9A.5-3, Control Building Fire Area F3302	Revised safe shutdown impact to reflect a redundant A train remains operable in response to 9.5-83.
79.	T9A.5-4, Turbine Building Fire Area F4197	Added Room 4109 to Fire Area F4197 at –1400 el.
80.	T9A.5-4, Turbine Building Fire Area F4197	Added Room 4506 to Fire Area F4197 at 28000 el.
81.	T9A.5-5, Radwaste Building Fire Area F6101	Revised statement for Radiological Release entry from "per 10 CFR 100 limits" to "Contained within building." for consistency. Additionally, Section 9A.4.5 indicates the dose limits will be with 10 CFR 20 limits not 10 CFR 100 limits.
82.	T9A.5-6, Electrical Building, Fire Area F5153	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change.
83.	T9A.5-6, Electrical Building, Fire Area F5163	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change.

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84.	T9A.5-6, Electrical Building, Fire Area F5201	The safe shutdown evaluation was revised in response to RAI 9.5-87 to clarify that even though a fire in this fire area can result in the loss of safety-related components, that safe shutdown is not adversely impacted. A fire in this area only adversely affects one (1) train, on-site and off-site power and related equipment.
85.	T9A.5-6, Electrical Building, Fire Area F5204	The safe shutdown evaluation was revised in response to RAI 9.5-87 to clarify that even though a fire in this fire area can result in the loss of safety-related components, that safe shutdown is not adversely impacted. A fire in this area only adversely affects one (1) train, on-site and off-site power and related equipment.
86.	T9A.5-6, Electrical Building, Fire Area F5250	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change.
87.	T9A.5-6, Electrical Building, Fire Area F5251	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change. The combustible load limit was changed from 700 to 1400 in response to RAI 9.5-90.
88.	T9A.5-6, Electrical Building, Fire Area F5260	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change.
89.	T9A.5-6, Electrical Building, Fire Area F5261	Fire Area revised to add a standby diesel modifier in response to RAI 9.5-90 following addition of the ancillary diesel generator approved under engineering change. The combustible load limit was changed from 700 to 1400 in response to RAI 9.5-90
90.	T9A.5-7, Yard, Fire Area F19160	This table was revised to clarify that there is only one non seismic motor driven fire pump in response to RAI 9.5-88.
91.	T9A.5-7, Yard, Fire Area F19161	This table was revised to clarify that there is only one non seismic motor driven fire pump in response to RAI 9.5-88.

Item	Location	Description of Change
92.	T9A.5-7, Yard, Fire Area F39151	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
93.	T9A.5-7, Yard, Fire Area F39151	Back up Fire Suppression revised in response to RAI 9.5-89.
94.	T9A.5-7, Yard, Fire Area F39161	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
95.	T9A.5-7, Yard, Fire Area F39161	Backup Fire Suppression revised in response to RAI 9.5-89.
96.	T9A.5-7, Yard, Fire Area F39252	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
97.	T9A.5-7, Yard, Fire Area F39252	Potential combustibles updated in response to RAI 9.5-89.
98.	T9A.5-7, Yard, Fire Area F39253	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
99.	T9A.5-7, Yard, Fire Area F39253	Potential combustibles and anticipated combustible load updated in response to RAI 9.5-89.
100.	T9A.5-7, Yard, Fire Area F39262	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
101.	T9A.5-7, Yard, Fire Area F39262	Potential combustibles updated in response to RAI 9.5-89.
102.	T9A.5-7, Yard, Fire Area F39263	Fire Area revised to reflect the description in S9A.4-10, and to address similarities between rooms and detection and suppression equipment in response to RAI 9.5-89.
103.	T9A.5-7, Yard, Fire Area F39263	Anticipated combustible load updated in response to RAI 9.5-89.
104.	S9A.6.4-1, RPS Scram Circuits, 3rd para, 1st and 2nd sent.	Revised air header dump valves to backup scram valves in response to RAI 16.2-135S01.
105.	S9A.6.4.1, RPS Scram Circuits, 3rd para, 2nd sent.	Corrected 240 VDC to 250 VDC.

Item	Location	Description of Change
106.	S9A.6.4.13, Safety-Related Instrumentation in Turbine and Electrical Buildings, Title and 1st sent	Revised title and 1st sentence of Safety-Related Instrumentation in Turbine and Electrical Buildings to note that safety-related instrumentation is installed in the Electrical Building in response to RAI 9.5-83.
107.	S9A.6.5.4, Diesel Day Tank Capacity Within Building, 3rd para.	Revised description of SDG day tank capacity requirement for consistency wiht Subsection 9.5.4.1.
108.	S9A.6.5.8 Title	Revised subsection Title in response to RAI 9.5-74.
109.	S9A.6.5.8, 3rd and 4th paras.	Revised paragraphs in response to RAI 9.5-72 to provide additional justification for exception to reaching all areas of containment using one (1) 100 ft length of fire hose. These two paragraphs clarify that full containment coverage by two hose streams will be provided by the 200-foot fire hose length described in Subsection 9.5.1.6.
110.	S9A.6.6.2, Buildings Containing Large Fire Areas without Sprinkler Protection, 2nd para, last sent	Corrected English equivalent value for 2230 m^2 area to 24004 ft^2.
111.	S9A.6.6.4, Lack of Fire Fighter Exterior Access Openings, without Sprinkler Protection, 1st para, last bullet	Corrected reference section of applicable IBC code.
112.	T9A.6-1, Turbine and Electrical Building Safety-Related Monitoring Devices, row Turbine Control Valve	Revised Turbine Control Valve Position as an RPS input to low oil pressure in the hydraulic trip system as RPS input to be consistent with the RPS description in Chapter 7.
113.	T9A.6-1, Turbine and Electrical Building Safety-Related Monitoring Devices, row 13.8kVv Bus undervoltage	Corrected kW to kV in response to RAI 9.5-83 and added description that loss of these circuits will result in a scram in response to RAI 9.5-87.