ABWR DCD Tier 2

25A5675AH Chapter 6 Revision 4 to Revision 5 Change List

Item	Location	Description of Change
1.	Chapter 6	Global chapter editorial change to add the document number to the header, change the revision number from Revision 4 to Revision 5, and update all instances of the company name to GE Hitachi Nuclear Energy (GEH)
2.	6.2.1.1.2.1 Drywell 3rd paragraph	Changed maximum drywell temperature to 177.2°C and added discussion on the change
3.	6.2.1.1.2.1 Drywell 4th paragraph	Changed maximum drywell pressure to 283.4 KPaG and margin to 9%
4.	6.2.1.1.2.1 Drywell 5th paragraph	Changed predicted value for primary containment-to-Reactor Building negative pressure to 8.76
5.	6.2.1.1.2.2 Wetwell 3rd paragraph	Changed wetwell chamber design temperature to 124°C
6.	6.2.1.1.2.2 Wetwell 6th paragraph	Changed value initial pool water temperature may rise to 76.6°C at 30 minutes and supression pool temperatures as high as 88.7°C
7.	6.2.1.1.3.2 Containment Design Parameters 2nd paragraph	Added last two sentences describing what systems the analyses used
8.	6.2.1.1.3.3 Accident Response Analysis 2nd paragraph	Removed phrase “plus providing NRC prescribed margins”
9.	6.2.1.1.3.3 Accident Response Analysis 3rd paragraph	Changed margin between the peak calculated value and the containment design pressure to 9% and removed the word “easily” before accomodate
10.	6.2.1.1.3.3 Accident Response Analysis 4th paragraph	Added sentence on tolerances for RPV vessel
11.	6.2.1.1.3.3.1.1 Assumptions for Short-Term Response Analysis Bullet (1)	Changed bullet (1) to state that the containment pressure response is maximized and item (1) (b) to high water level instead of low water level

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12.	6.2.1.1.3.3.1.1 Assumptions for Short-Term Response Analysis Bullet (5)	Changed bullet (5) last sentence to state that the seventh node models reactor fuel, removed HPCF from item (b), changed pressure value to 6.85 MPaA in item (c), removed pump heat from item (d), and changed pressure to 7.27 MPaA in item (e)
13.	6.2.1.1.3.3.1.1 Assumptions for Short-Term Response Analysis Bullet (6)	Changed bullet (6) to remove HPCF, RCIC, and RHR systems from the short term containment response analysis
14.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (1)	Changed bullet (1) to include discussion of HPCF, RCIC, and RHR system availability and starting assumptions
15.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (2)	Added two sigma uncertainty to bullet (2)
16.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (3)	Changed discussion in bullet (3) on containment system volume and wetwell airspace volume
17.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (4)	Changed timing to after 30 minutes and number of RHR heat exchangers to one
18.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (6)	Replaced discussion on lower drywell flooding to state that it is not modeled
19.	6.2.1.1.3.3.1.2 Assumptions for Long-Term Cooling Analysis Bullet (7)	Removed previous assumption and inserted that the structural heat sinks are modeled
20.	6.2.1.1.3.3.1.3 Short-Term Accident Responses 1st paragraph	Changed the peak pressure, temperature, and margin in the first paragraph

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21.	6.2.1.1.3.3.1.3 Short-Term Accident Responses	Changed the peak pressure, temperature, and margin in the first paragraph; changed stable peak pressure in second paragraph to "short-term drywell pressure peak"; and updated assumption (1) by adding "and wetwell air mass temperature"
22.	6.2.1.1.3.3.1.4 Long-Term Accident Responses	Changed pressure, temperature and time values in second paragraph
23.	6.2.1.1.3.3.2 Main Steamline Break	Changed wording and time in assumption (5) to 5 seconds
24.	6.2.1.1.3.3.2.1 Assumptions for Short-Term Response Analysis	Replaced first to assuptions with a single assumption number (1)
25.	6.2.1.1.3.3.2.2 Assumption for Long-Term Cooling Analysis	Added two exceptions to previously adapted assumptions
26.	6.2.1.1.3.3.2.3 Short-Term Accident Response	Changed which figures were referenced and replaced language in last paragraph
27.	6.2.1.1.3.3.2.4 Long-Term Accident Response	Replaced previous language in subsection adding reference to results
28.	6.2.1.1.3.4.1 Short-Term Pressurization Model	Updated referenced figures
29.	6.2.1.1.4 Negative Pressure Design Evaluation	Added second paragraph and changed limiting case to LOCA
30.	6.2.1.1.4.1 Wetwell-to-Drywell Negative Differential Pressure	Replaced entire section after first two paragraphs with new discussion
31.	6.2.1.1.4.2 Wetwell-to-Reactor Building Negative Differential Pressure	Replaced entire section after first two paragraphs with new discussion
32.	6.2.1.1.5.4 Bypass Capability With Containment Spray and Heat Sinks	Updated design flow rate and wetwell gas space pressure in 2nd paragraph. Also updated pressure in assumption (3) and added credit for both sprays in assumption (4)

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33.	6.2.1.1.5.6.1 Actuation of Wetwell Sprays	Updated wetwell gas space pressure in 1st paragraph
34.	6.2.1.1.6 Suppression Pool Dynamic Loads	Added the word "in" before subsection references
35.	6.2.1.3 Mass and Energy Release Analyses for Postulated Loss-of-Coolant Accidents	Changed time in 2nd paragraph to 2.0 seconds and replaced "GE" with "GEH"
36.	6.2.2.3.1 System Operation and Sequence of Events	Changed time and description in assumption (4)
37.	6.2.2.3.2 Summary of Containment Cooling Analysis	Updated reference in 2nd paragraph to "Subsection 6.2.1.1.3"
38.	6.2.7.6 Confirmation of FWLB Feedwater Side Mass Flow and Enthalpy	Added COL applicant item 6.2.7.6
39.	6.2.7.7 Confirmation of Drywell Connecting Vent (DCV) Minimum Free Flow Area	Added COL applicant item 6.2.7.7
40.	Table 6.2- 1 Containment Parameters	Updated design value for wetwell temperature and all calculated values
41.	Table 6.2- 2 Containment Design Parameters	Updated values in Wetwell column
42.	Table 6.2- 2a Engineered Safety Systems Information for Containment Response Analyses	Updated table values and replaced table notes
43.	Figure 6.2- 2 Feedwater Line Break—RPV Side Break Area	Replaced previous figure

Item	Location	Description of Change
44.	Figure 6.2- 3 Feedwater Line Break Flow—Feedwater System Side of Break	Replaced previous figure
45.	Figure 6.2- 4 Feedwater Line Break Flow Enthalpy—Feedwater System Side of Break	Replaced previous figure
46.	Figure 6.2- 5 Lower Drywell Air Transfer Percentage for Model Assumption Versus Actual Case	Replaced previous figure
47.	Figure 6.2- 6 Pressure Response of the Primary Containment for Feedwater Line Break	Replaced previous figure
48.	Figure 6.2- 7 Temperature Response of the Primary Containment for Feedwater Line Break	Replaced previous figure
49.	Figure 6.2- 8 Temperature Time History After a Feedwater Line Break	Replaced previous figure
50.	Figure 6.2- 8a Pressure Time History After a Feedwater Line Break	Added new figure
51.	Figure 6.2- 9 ABWR Main Steamlines with a Break	Changed flow areas to 1.06 m^2 and 0.3306 m^2
52.	Figure 6.2- 10 MSLB Area as a Function of Time	Replaced previous figure

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53.	Figure 6.2- 11 Feedwater Specific Enthalpy as a Function of Integrated Feedwater Flow Mass	Replaced previous figure
54.	Figure 6.2- 12 Pressure Time History for MSLB with Two-Phase Blowdown Starting	Revised figure title and replaced previous figure
55.	Figure 6.2- 13 Temperature Time History for MSLB with Two-Phase Blowdown Starting	Revised figure title and replaced previous figure
56.	Figure 6.2- 14 Pressure Time History for Long-term MSLB	Revised figure title and replaced previous figure
57.	Figure 6.2- 15 Temperature Time History for Long-term MSLB	Revised figure title and replaced previous figure
58.	Figure 6.2-17 Differential Pressures in Wetwell and Drywell Relative to Reactor Building for Vacuum Breaker Size of .82 m2	Revised figure title and replaced previous figure
59.	Figure 6.2-18 Differential Pressures in Wetwell and Drywell Relative to Reactor Building with Wetwell Spray for Vacuum Breaker Size of .82 m2	Revised figure title and replaced previous figure

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60.	Figure 6.2- 22 Break Flow Rate and Specific Enthalpy for the Feedwater Line Break Flow Coming from the Feedwater System Side	Replaced previous figure
61.	Figure 6.2- 23 Break Flow Rate and Specific Enthalpy for the Feedwater Line Break Flow Coming from the RPV Side	Replaced previous figure
62.	Figure 6.2- 24 Break Flow Rate and Specific Enthalpy for the Main Steamline Break with Two-Phase Blowdown Starting When the Collapsed Water Level Reaches the Steam Nozzle	Replaced previous figure
63.	Figure 6.2- 25	Deleted since figure no longer used
64.	Section 6.3.3.2, Criterion 5	Company name GE was updated to GEH
65.	Section 6C.1, 1st paragraph	Company name GE was updated to GEH in two places
66.	6E.3 Effect on Existing Bypass Analyses	Changed first sentence to “may”
67.	6E.3.2 Duration of Bypass Flow	Changed time values in three places