US-APWR DCD Revision 4 Tracking Report

March 2014

Revision History

Revision	Page	Description
0	All	Including the following information; 1. RAI responses that were submitted from June 29, 2013 through February 28, 2014. 2. MHI proposed change items 3. Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 4. Updated listing of the Technical Reports in Section 1.6 5. DCD mark-ups which had been submitted as a hand mark-up in the associated RAI response

Mitsubishi Heavy Industries, Ltd.
16-5, Konan 2-chome, Minato-ku
Tokyo 108-8215 Japan

General Description

This report includes a table that identifies the impact of each response to the Request for Additional Information ("RAI") relative to the Design Control Document ("DCD") Revision 4 of US-APWR. This table denotes the RAI responses which have been submitted from June 29, 2013 through February 28, 2014 that have been incorporated into this Tracking Report using red text.

This report also includes a change list and markups for each Chapter in the US-APWR DCD Revision 4. The change list identifies the changes impacted by the responses to RAI, and other updates which have been previously informed and accepted by the U.S. Nuclear Regulatory Commission ("NRC"). The report also includes DCD markups, but does not markups for RAI responses already formally submitted.

Contents

For ease of using this Tracking Report, each chapter is organized in a stand alone fashion that includes a cover sheet and the following relevant information:

- DCD Change List – a list of the changes resulting from RAI responses and other changes. Standard description of list is shown in Table 1.

- DCD Markups – a copy of the DCD pages that have changes except for RAI responses or other changes which have already been attached to formally submitted letters.

Table 1 Change List Standard Description Matrix

Change due to:	Change ID No. type:	"Reason for change" type	" Change Summary" type
DCD RAI Response	DCD_xx.xx-xx (xx.xx-xx is RAI question number)	Response to DCD RAI No. xxx-xxxx MHI Letter UAP-HF-xxxxx	**[Paragraphs]** -Added second paragraph to reasons(identify xxxxxx/replace xxx) **[Subsections]** -Added Subsection xx.xx.xx -Deleted Subsection xx.xx.xx -Revised Subsection for RAI Response -Added new Subsection xx.xx.xx **[description]** -Added descriptions about xxxxxxx -Deleted description as follow: xxxxxxxxxxxxxxxxxxxxxxxxxx -Replaced "xxxxx" with "xxxxx". **[Reference]** -Added/Deleted reference to where. **[Tables/Figures]** -Added Table/Figure xx.xx-xxx -Deleted Table/Figure xx.xx-xxx -Revised Table xx.xx-xxx to reasons as discussed in xxxxx
MHI identified change COL Applicants comment Industry guides Technical reasons	MIC-xx-xx-xxxxx (numbering by ledger)	Editorial correction	
		Erratum	
		Clarification	
		Commitment to NRC	
		XXX (i.e DCWG) Meeting (mm/dd/yyyy)	
		Due to the revision up of industry guides (i.e NEI)	

Chapter:1

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
1	Introduction and Interfaces	440	1.2-1	2009/9/8	Y	N	N		-	DCD_1.2-1	4	2
		440	1.2-2	2009/9/8	N	N	N		-	-	N/A	N/A
		440	1.2-3	2009/9/8	N	N	N		-	-	N/A	N/A
		440	1.2-4	2009/9/8	Y	N	N		-	DCD_1.2-4	4	2
		440	1.2-5	2009/9/8	Y	N	N		-	DCD_1.2-5	4	2
		531	01-7	2010/2/3	Y	N	N		-	DCD_01-7	2	3
		944	01.05-1	07/18/2012	Y	Y	Y		-	-	N/A	N/A
		944	01.05-2	07/18/2012	Y	Y	Y		-	-	N/A	N/A
		974	01.05-3	12/10/2012	Y	Y	Y		-	-	N/A	N/A
		1043	01.05-4	8/13/2013	Y	N	N		-	DCD_01.05-4	0	
		1053	01.05-5	10/8/2013	N	N	N		-	-	N/A	N/A
		1053	01.05-6	10/8/2013	N	N	N		-	-	N/A	N/A
		1053	01.05-7	10/8/2013	N	N	N		-	-	N/A	N/A
		1053	01.05-8	10/8/2013	N	N	N		-	-	N/A	N/A
		1053	01.05-9	10/8/2013	N	N	N		-	-	N/A	N/A
		1056	01.05-10	12/2/2013	N	N	N		-	-	N/A	N/A
		1057	01.05-11	12/03/2013	N	N	N		-	-	N/A	N/A

Chapter:2

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
2.0	Site Charactoristics and Site	518	02-1	2010/2/15	Y	Y	N		-	DCD_02-1	2	3
	Parameters	819	02-2	2011/10/11	Y	Y	N		-	DCD_02-2	1	4
		907	02-3	6/26/2012	N	Y	Y		-	DCD_02-3	NA	4
		907	02-3	9/13/2012	Y	Y	Y		-	DCD_02-3	3	4
		907	02-3	4/26/2013	Y	Y	Y		-	DCD_02-3	4	4
2.2.3	Evaluation of Potential Accidents											
2.3.1	Regional Climatology	23	02.03.01-1	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-1	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-1	-	1
		23	02.03.01-2	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-2	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-2	-	1
		23	02.03.01-3	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-3	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-3	-	1
		23	02.03.01-4	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-4	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-4	-	1
		23	02.03.01-5	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-5	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-5	-	1
		23	02.03.01-6	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-6	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-6	-	1
		23	02.03.01-7	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-7	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-7	-	1
		23	02.03.01-8	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-8	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-8	-	1
		23	02.03.01-9	2008/7/18	N	N	N	fin.	-			
		23	02.03.01-9	2008/8/12	N	N	N	fin.	-	-	N/A	N/A
		23	02.03.01-10	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-10	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-10	-	1
		23	02.03.01-11	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-11	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-11	-	1
		23	02.03.01-12	2008/7/18	Y	N	N	fin.	-			
		23	02.03.01-12	2008/8/12	Y	N	N	fin.	-	DCD_02.03.01-12	-	1
		23	02.03.01-13	2008/7/18	N	N	N	fin.	-			
		23	02.03.01-13	2008/8/12	N	N	N	fin.	-	-	N/A	N/A
		23	02.03.01-14	2008/7/18	N	N	N	fin.	-			
		23	02.03.01-14	2008/8/12	N	N	N	fin.	-	-	N/A	N/A
		23	02.03.01-14	2013/4/23	N	N	N		-	-	N/A	N/A
		41	02.03.01-15	2008/9/12	Y	N	N	fin.	-	DCD_02.03.01-15	-	1
		59	02.03.01-16	2008/9/10	Y	N	N	fin.	-	DCD_02.03.01-16	0	2
2.3.2	Local Meteorology	22	02.03.02-1	2008/7/18	Y	N	N	fin.	-			
		22	02.03.02-1	2008/8/12	Y	N	N	fin.	-	DCD_02.03.02-1	-	1
		22	02.03.02-2	2008/7/18	N	N	N	fin.	-			
		22	02.03.02-2	2008/8/12	N	N	N	fin.	-	-	N/A	N/A
		547	02.03.01-17	2010/4/14	Y	Y	N			DCD_02.03.01-17	3	3
		547	02.03.01-18	2010/4/14	Y	N	N			DCD_02.03.01-18	3	3
		547	02.03.01-19	2010/4/14	Y	N	N			DCD_02.03.01-19	3	3
2.3.3	Onsite Meteorological	21	02.03.03-1	2008/7/18	Y	N	N	fin.	-			
	Measurement Programs	21	02.03.03-1	2008/8/12	Y	N	N	fin.	-	DCD_02.03.03-2	-	1
		21	02.03.03-2	2008/7/18	N	N	N	fin.	-			
		21	02.03.03-2	2008/8/12	Y	N	N	fin.	-	DCD_02.03.03-2	-	1

Chapter:2

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
2.3.4	Short-term Dispersion Estimates	42	02.03.04-1	2008/9/10	Y	N	N	fin.	-	DCD_02.03.04-1	0	2
	for Accident Releases	42	02.03.04-1	2009/6/4	Y	Y	N		-	DCD_02.03.04-1	-	2
		42	02.03.04-2	2008/9/10	Y	N	N	fin.	-	DCD_02.03.04-2	0	2
		42	02.03.04-2	2009/6/4	Y	Y	N		-	DCD_02.03.04-2	3	2
		42	02.03.04-3	2008/9/10	N	N	N	fin.	-	-	N/A	N/A
		42	02.03.04-3	2009/6/4	Y	N	N		-	DCD_02.03.04-3	-	2
		42	02.03.04-4	2008/9/10	Y	N	N	fin.	-	DCD_02.03.04-4	0	2
		42	02.03.04-4	2009/6/4	Y	N	N		-	-	3	2
		43	02.03.04-5	2008/9/10	Y	Y	N	fin.	-	DCD_02.03.04-5	0	2
		OI	02.03.04-1	2009/6/4	Y	Y	N		-	DCD_02.03.04-1	-	2
		OI	02.03.04-2	2009/6/4	Y	N	N		-	DCD_02.03.04-2	-	2
		OI	02.03.04-3	2009/6/4	Y	Y	N		-	DCD_02.03.04-3	-	2
		OI	02.03.04-4	2009/6/4	Y	N	N		-	DCD_02.03.04-4	-	2
		OI	02.03.04-5	2009/6/4	Y	Y	N		-	DCD_02.03.04-5	-	2
		OI	02.03.04-6	2009/6/4	Y	Y	N		-	DCD_02.03.04-6	-	2
		OI	02.03.04-7	2009/6/4	Y	N	N		-	DCD_02.03.04-7	-	2
		562	02.03.04-6	2010/4/28	Y	N	N		-	DCD_02.03.04-6	3	3
		562	02.03.04-7	2010/4/28	Y	N	N		-	DCD_02.03.04-7	3	3
		562	02.03.04-8	2010/4/28	Y	N	N		-	DCD_02.03.04-8	3	3
		562	02.03.04-9	2010/4/28	Y	Y	N		-	DCD_02.03.04-9	3	3
				2010/7/14	Y	N	N		-	DCD_02.03.04-9	4	3
		1016	02.03.04-11	4/24/2013	N	N	N			-	N/A	N/A
2.3.5	Long-Term Atmospheric Dispersion	44	02.03.05.-1	2008/9/10	Y	N	N	fin.	-	DCD_02.03.05-1	0	2
	Estimates for Routine Releases											
2.4	Hydrology	13	02.04-1	2008/7/18	Y	N	N	fin.	-	DCD_0.2.04-1	-	1
		13	02.04-2	2008/7/18	Y	N	N	fin.	-	DCD_0.2.04-2	-	1
2.4.1	Hydrologic Description	14	02.04.01-1	2008/7/18	Y	N	N	fin.	-	DCD_0.2.04.01-1	-	1
		14	02.04.01-2	2008/7/18	Y	N	N	fin.	-	DCD_0.2.04.01-2	-	1
2.4.2	Floods											
2.4.3	Probable Maximum Flood (PMF)											
	on Streams and Rivers											

Chapter:2

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
2.4.4	Potential Dam Failures	15	02.04.04-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.04-1	-	1
		15	02.04.04-2	2008/7/18	Y	N	N	fin.	-	DCD_02.04.04-2	-	1
2.4.5	Probable Maximum Surge	16	02.04.05-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.05-1	-	1
	and Seiche Flooding											
2.4.6	Probable Maximum	17	02.04.06-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.06-1	-	1
	Tsunami Hazards	17	02.04.06-2	2008/7/18	Y	N	N	fin.	-	DCD_02.04.06-2	-	1
2.4.7	Ice Effects											
2.4.8	Cooling Water Canals											
	and Reservoirs											
2.4.9	Channel Diversions											
2.4.10	Flooding Protection Requirements											
2.4.11	Low Water Considerations	18	02.04.11-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.11-1	-	1
2.4.12	Groundwater	19	02.04.12-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.12-1	0	2
2.4.13	Accidental Releases	20	02.04.13-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.13-1	-	1
	of Radioactive Liquid Effluents											
	of Radioactive Liquid Effluents											

Chapter:2

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
2.4.14	Technical Specifications	24	02.04.14-1	2008/7/18	Y	N	N	fin.	-	DCD_02.04.14-1	-	1
	and Emergency											
	Operation Requirements											
2.5.1	Technical Specifications											
	and Emergency											
	Operation Requirements											
2.5.2	Vibratory Ground Motion	96	02.05.02-01	2008/12/3	Y	N	N	fin.	-	DCD_02.05.02-1	0	2
		933	02.05.02-2	7/11/2012	N	N	N		-	-	N/A	N/A
		933	02.05.02-3	7/11/2012	N	N	N		-	-	N/A	N/A
2.5.3	Surface Faulting											
2.5.4	Stability of Subsurface Materials	94	02.05.04-01	2008/12/3	Y	N	N	fin.	-	DCD-02.05.04-1	0	2
	and Foundations	94	02.05.04-01	2013/3/29	N	N	N		-	-	N/A	N/A
		94	02.05.04-02	2008/12/3	N	N	N	fin.	-	-	N/A	N/A
		94	02.05.04-02	2/27/2013	N	N	N		-	-	N/A	N/A
		OI	02.05.04-1	2009/6/22	Y	N	N		-	DCD_02.05.04-1	3	2
		OI	02.05.04-01A	2010/2/22	Y	N	N		-	DCD_02.05.04-01A	2	3
2.5.5	Stability fo Slopes	95	02.05.05-01	2008/12/3	Y	N	N	fin.	-	DCD_02.05-1	0	2
		95	02.05.05-02	2008/12/3	N	N	N	fin.	-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
3.2.1	Seismic Classification	287	03.02.01-1	2009/5/8	Y	N	N		-	DCD_03.02.01-1	3	2
		287	03.02.01-2	2009/5/8	Y	N	N		-	DCD_03.02.01-2	3	2
		287	03.02.01-3	2009/5/21	Y	N	N		-	DCD_03.02.01-3	3	2
		287	03.02.01-4	2009/5/21	N	N	N		-	-	N/A	N/A
		287	03.02.01-5	2009/5/8	N	N	N		-	-	N/A	N/A
		287	03.02.01-6	2009/5/21	Y	Y Table 3.2-201	N		-	DCD_03.02.01-6	3	2
		287	03.02.01-7	2009/5/21	Y	N	N		-	DCD_03.02.01-7	3	2
		287	03.02.01-8	2009/5/8	N	N	N		-	-	N/A	N/A
		287	03.02.01-9	2009/5/21	Y	N	N		-	DCD_03.02.01-9	3	2
		287	03.02.01-10	2009/5/21	Y	N	N		-	DCD_03.02.01-10	3	2
		287	03.02.01-11	2009/5/21	N	N	N		-	-	N/A	N/A
		287	03.02.01-12	2009/5/21	N	N	N		-	-	N/A	N/A
		287	03.02.01-13	2009/5/8	N	N	N		-	-	N/A	N/A
		287	03.02.01-14	2009/5/21	Y	N	N		-	DCD_03.02.01-14	3	2
		581	03.02.01-15	2010/7/21	Y	N	N		-	DCD_03.02.01-15	4	3
		581	03.02.01-16	2010/7/21	Y	N	N		-	DCD_03.02.01-16	4	3
		581	03.02.01-17	2010/7/21	N	N	N		-	-	N/A	N/A
		581	03.02.01-18	2010/7/21	N	N	N		-	-	N/A	N/A
		684	03.02.01-19	7/27/2012	Y	N	N		-	-	N/A	N/A
		684	03.02.01-20	7/27/2012	N	N	N		-	-	N/A	N/A
		723	03.02.01-21	2011/4/21	Y	N	N		-	DCD_03.02.02-20	0	4
		813	03.02.01-22	7/27/2012	Y	N	N		-	DCD_03.02.02-21	4	4
		1012	03.02.01-23	4/11/2013	Y	N	N		-	DCD_03.02.02-22	4	4
3.2.2	System Quality Group	276	03.02.02-1	2009/4/24	Y	N	N		-	DCD_03.02.02-1	3	2
	Classification	276	03.02.02-2	2009/4/24	Y	N	N		-	DCD_03.02.02-2	3	2
		276	03.02.02-3	2009/5/8	Y	N	N		-	DCD_03.02.02-3	3	2
		276	03.02.02-4	2009/4/24	Y	N	N		-	DCD_03.02.02-4	3	2
		276	03.02.02-5	2009/5/8	Y	N	N		-	DCD_03.02.02-5	3	2
		276	03.02.02-6	2009/5/8	N	N	N		-	-	N/A	N/A
		276	03.02.02-7	2009/5/8	N	N	N		-	-	N/A	N/A
		276	03.02.02-8	2009/5/8	N	N	N		-	-	N/A	N/A
		276	03.02.02-9	2009/4/24	Y	N	N		-	DCD_03.02.02-9	3	2
									CP RAI 67	CP_03.02.02-3	0	3
		580	03.02.02-10	2010/7/21	Y	Y	N		-	DCD_03.02.02-10	4	3
		580	03.02.02-11	2010/7/21	N	N	N		-	-	N/A	N/A
		580	03.02.02-12	2010/7/21	Y	N	N		-	DCD_03.02.02-12	4	3
		580	03.02.02-13	2010/7/21	N	N	N		-	-	N/A	N/A
		580	03.02.02-14	2010/7/21	N	N	N		-	-	N/A	N/A
		580	03.02.02-15	2010/7/21	N	N	N		-	-	N/A	N/A
		580	03.02.02-16	2010/7/21	N	N	N		-	-	N/A	N/A
		667	03.2.02-17	7/27/2012	Y	Y	Y		-	DCD_03.02.02-17	4	4
		667	03.2.02-18	7/27/2012	N	N	N		-	-	N/A	N/A
		667	03.2.02-19	7/27/2012	N	N	N		-	-	N/A	N/A
		724	03.02.02-20	2011/4/21	Y	N	N		-	DCD_03.02.02-20	0	4
		914	03.02.02-21	10/09/2012	Y	N	N		-	DCD_03.02.02-21	3	4
		914	03.02.02-22	11/02/2012	Y	N	N		-	DCD_03.02.02-22	3	4
		914	03.02.02-23	10/09/2012	N	N	N		-	-	N/A	N/A
		976	03.02.02-24	1/15/2013	N	N	N		-	-	N/A	N/A
		978	03.02.02-25	2/1/2013	Y	N	N		-	DCD_03.02.02-25	4	4
3.3.1	Wind Loadings	215	3.3.1-01	2009/4/9	N	N	N		-	-	N/A	N/A
		215	3.3.1-02	2009/4/9	N	N	N		-	-	N/A	N/A
		215	3.3.1-03	2009/4/9	N	N	N		-	-	N/A	N/A
		215	3.3.1-04	2009/4/9	Y	N	N		-	DCD_3.3.1-04	3	2
		215	3.3.1-05	2009/4/9	Y	N	N		-	DCD_3.3.1-05	3	2

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		215	3.3.1-06	2009/4/9	N	N	N		-	-	N/A	N/A
3.3.2	Tornado Loadings	218	3.3.2-01	2009/4/9	N	N	N		-	-	N/A	N/A
		218	3.3.2-02	2009/4/9	Y	N	N		-	DCD_3.3.2-02	3	2
		218	3.3.2-03	2009/4/9	Y	N	N		-	DCD_3.3.2-03	3	2
		218	3.3.2-04	2009/4/9	Y	N	N		-	DCD_3.3.2-04	3	2
		817	03.03.02-5	9/26/2011	Y	Y	N		-	DCD_3.3.2-05	1	4
		908	03.03.02-6	6/26/2012	Y	N	N		-	-	N/A	N/A
3.4.1	Internal Flood Protection for	220	3.4.1-01	2009/4/8	Y	N	N		-			
	Onsite Equipment Failures	220	3.4.1-01	2009/5/21	Y	N	N		-	DCD_3.4.1-01	3	2
		220	3.4.1-02	2009/4/23	Y	N	N		-	DCD_3.4.1-02	3	2
		220	3.4.1-03	2009/4/8	Y	N	N		-	DCD_3.4.1-03	3	2
		220	3.4.1-04	2009/4/23	Y	N	N		-			
		220	3.4.1-04	2009/5/21	Y	N	N		-	DCD_3.4.1-04	3	2
		220	3.4.1-05	2009/4/23	Y	N	N		-			
		220	3.4.1-05	2009/5/21	Y	N	N		-	DCD_3.4.1-05	3	2
		220	3.4.1-06	2009/4/23	Y	N	N		-			
		220	3.4.1-06	2009/5/21	Y	N	N		-	DCD_3.4.1-06	3	2
		220	3.4.1-07	2009/4/23	N	N	N		-	-		
		220	3.4.1-07	2009/5/21	N	N	N		-	-	N/A	N/A
		220	3.4.1-08	2009/4/23	N	N	N		-	-		
		220	3.4.1-08	2009/5/21	N	N	N		-	-	N/A	N/A
		220	3.4.1-09	2009/4/23	Y	N	N		-			
		220	3.4.1-09	2009/5/21	Y	N	N		-	DCD_3.4.1-09	3	2
		220	3.4.1-10	2009/4/23	Y	N	N		-			
		220	3.4.1-10	2009/5/21	Y	N	N		-	DCD_3.4.1-10	3	2
		220	3.4.1-11	2009/4/23	Y	N	N		-			
		220	3.4.1-11	2009/5/21	Y	N	N		-	DCD_3.4.1-11	3	2
		220	3.4.1-12	2009/4/23	Y	N	N		-			
		220	3.4.1-12	2009/5/21	Y	N	N		-	DCD_3.4.1-12	3	2
		220	3.4.1-13	2009/4/23	Y	N	N		-			
		220	3.4.1-13	2009/5/21	N	N	N		-	-	N/A	N/A
		220	3.4.1-14	2009/4/23	Y	N	N		-			
		220	3.4.1-14	2009/5/21	Y	N	N		-	DCD_3.4.1-14	3	2
		220	3.4.1-15	2009/4/23	Y	N	N		-			
		220	3.4.1-15	2009/5/21	Y	N	N		-	DCD_3.4.1-15	3	2
		220	3.4.1-16	2009/4/23	Y	N	N		-			
		220	3.4.1-16	2009/5/21	Y	N	N		-	DCD_3.4.1-16	3	2
		220	3.4.1-17	2009/4/23	Y	N	N		-			
		220	3.4.1-17	2009/5/21	Y	N	N		-	DCD_3.4.1-17	3	2
		220	3.4.1-18	2009/4/8	Y	N	N		-	DCD_3.4.1-18	3	2
		220	3.4.1-19	2009/4/8	Y	N	N		-	DCD_3.4.1-19	3	2
		220	3.4.1-20	2009/4/8	N	N	N		-	-	N/A	N/A
		579	03.04.01-21	2010/5/27	Y	Y	N		-	DCD_03.04.01-21	4	3
		579	03.04.01-22	2010/5/27	Y	N	N		-	DCD_03.04.01-22	4	3
		579	03.04.01-22	2010/12/9	Y	N	N		-		6	3
		579	03.04.01-23	2010/5/27	Y	N	N		-	DCD_03.04.01-23	4	3
		579	03.04.01-24	2010/6/21	Y	N	N		-	DCD_03.04.01-24	4	3
		579	03.04.01-25	2010/5/27	Y	N	N		-	DCD_03.04.01-25	4	3
		579	03.04.01-26	2010/6/21	Y	N	N		-	DCD_03.04.01-26	4	3
		579	03.04.01-27	2010/6/21	Y	N	N		-	DCD_03.04.01-27	4	3
		579	03.04.01-28	2010/6/21	Y	N	N		-	DCD_03.04.01-28	4	3
		841	03.04.01-29	10/19/2012	Y	N	N		-	DCD_03.04.01-29	3	4

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		841	03.04.01-29	12/26/2012	Y	N	N		-	DCD_03.04.01-29	3	4
		841	03.04.01-29	4/2/2013	Y	N	N		-	DCD_03.04.01-29	4	4
		841	03.04.01-29	7/2/2013	Y	N	N		-	DCD_03.04.01-29	5	4
		841	03.04.01-30	10/19/2012	N	N	N		-	-	N/A	N/A
		842	03.04.01-31	12/19/2011	Y	N	N		-	DCD_03.04.01-31	1	4
		842	03.04.01-32	12/19/2011	Y	N	N		-	DCD_03.04.01-32	1	4
		842	03.04.01-32	10/25/2012	Y	Y	Y		-	DCD_03.04.01-32	3	4
		1030	03.04.01-33	6/5/2013	Y	N	N		-	DCD_03.04.01-33	5	4
3.4.2	Analysis Procedures	219	3.4.2-01	2009/4/9	N	N	N		-	-	N/A	N/A
		219	3.4.2-02	2009/4/9	N	N	N		-	-	N/A	N/A
		219	3.4.2-03	2009/4/9	N	N	N		-	-	N/A	N/A
		219	3.4.2-04	2009/4/9	Y	N	N		-	DCD_3.4.2-04	3	2
			03.04.02-1									
			03.04.02-2									
			03.04.02-3									
			03.04.02-4									
		489	03.04.02-5	12/26/2009	N	N	N		-	-	N/A	N/A
		489	03.04.02-5	2013/3/29	N	N	N		-	-	N/A	N/A
		489	03.04.02-5	1/10/2014	N	N	N		-	-	N/A	N/A
		546	03.04.02-6	2010/4/16	N	N	N		-	-	N/A	N/A
		546	03.04.02-6	2013/3/29	N	N	N		-	-	N/A	N/A
3.5.1.1	Internally Generated Missiles	127	3.5.1.1-01	2009/1/28	Y	N	N		-	DCD_3.5.1.1-01	1	2
	(Outside Containment)	127	3.5.1.1-02	2009/1/28	Y	N	N		-	DCD_3.5.1.1-02	1	2
		127	3.5.1.1-03	2009/1/28	Y	N	N		-	DCD_3.5.1.1-03	1	2
		127	3.5.1.1-04	2009/1/28	Y	Y	N		-	DCD_3.5.1.1-04	1	2
		127	3.5.1.1-05	2009/1/28	Y	N	N		-	DCD_3.5.1.1-05	1	2
		359	3.5.1.1.3-S01	2009/6/5	Y	Y	N		-	DCD_3.5.1.1.3-S01	3	2
3.5.1.2	Internally-Generated Missiles	152	3.5.1.2-01	2009/2/4	Y	N	N		-	DCD_3.5.1.2-01	1	2
	(Inside Containment)	152	3.5.1.2-02	2009/2/4	Y	N	N		-	DCD_3.5.1.2-02	1	2
		152	3.5.1.2-03	2009/2/4	Y	N	N		-	DCD_3.5.1.2-03	1	2
3.5.1.3	Turbine Missiles	323	03.05.01.03-1/3.5.1.3-1	2009/5/20	N	N	N		-	-	N/A	N/A
		323	03.05.01.03-2/3.5.1.3-2	2009/5/20	Y	N	N		-	D_03.05.01.03-2/3.5.1	3	2
		323	03.05.01.03-3/3.5.1.3-3	2009/5/20	Y	N	N		-	D_03.05.01.03-3/3.5.1	3	2
		324	03.05.01.03-1/3.5.1.3-1	2009/5/20	Y	N	N		-	D_03.05.01.03-1/3.5.1	-	2
		324	03.05.01.03-2/3.5.1.3-2	2009/5/20	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		324	03.05.01.03-3/3.5.1.3-3	2009/5/20	N	N	N		-	-	N/A	N/A
		324	03.05.01.03-4/3.5.1.3-4	2009/5/20	N	N	N		-	-	N/A	N/A
		324	03.05.01.03-5/3.5.1.3-5	2009/5/20	N	N	N		-	-	N/A	N/A
		324	03.05.01.03-6/3.5.1.3-6	2009/5/20	N	N	N		-	-	N/A	N/A
		324	03.05.01.03-7/3.5.1.3-7	2009/5/20	N	N	N		-	-	N/A	N/A
		323	03.05.01.03-3	2010/5/24	Y	N	N		-	DCD_03.05.01.03-3	4	3
3.5.1.4	Missiles Generated by	154	3.5.1.4-01	2009/2/4	Y	N	N		-	DCD_3.5.1.4-01	1	2
	Tornadoes and Extreme Winds	154	3.5.1.4-02	2009/2/4	N	N	N		-		N/A	N/A
		154	3.5.1.4-03	2009/2/4	Y	N	N		-	DCD_3.5.1.4-03	1	2
		154	3.5.1.4-04	2009/2/4	Y	N	N		-	DCD_3.5.1.4-04	1	2
		154	3.5.1.4-05	2009/2/4	Y	N	N		-	DCD_3.5.1.4-05	1	2
		357	3.5.1.4-02-S01	2009/6/4	Y	Y	N		-	DCD_3.5.1.4-02-S01	3	2
3.5.1.5	Site Proximity Missiles											
	(Except Aircraft)											
3.5.1.6	Aircraft Hazards											
3.5.2	Structures, Systems, and	153	3.5.2-01	2009/2/4	Y	N	N		-	DCD_3.5.2-01	1	2
	Components to be Protected											
	from Externally-Generated											
	Missiles											
3.5.3	Barrier Design Procedures	221	3.5.3-01	2009/4/8	N	N	N		-	-	N/A	N/A
		221	3.5.3-02	2009/4/8	Y	N	N		-	DCD-3.5.3-02	3	2
		221	3.5.3-03	2009/4/8	Y	N	N		-	DCD-3.5.3-03	3	2
		221	3.5.3-04	2009/4/8	Y	N	N		-	DCD-3.5.3-04	3	2
		221	3.5.3-05	2009/4/8	N	N	N		-	-	N/A	N/A
		221	3.5.3-06	2009/4/8	N	N	N		-	-	N/A	N/A
		482	03.05.03-7	2009/12/9	N	N	N		-	-	N/A	N/A
		482	03.05.03-8	2009/12/9	Y	N	N		-	DCD_03.05.03-8	1	3
		686	03.05.03-9	2011/2/28	Y	N	N		-	DCD_03.05.03-9	0	4
		758	03.05.03-10	12/09/2011	Y	N	N		-	DCD_03.05.03-10	1	4
		758	03.05.03-10	2/6/2013	Y	N	N		-	DCD_03.05.03-10	4	4
		981	03.05.03-11	2/5/2013	Y	N	N		-	DCD_03.05.03-11	4	4
3.6.1	Plant Design for Protection	180	3.6.1-1	2009/3/3	Y	N	N		-	DCD_3.6.1-1	2	2
	Against Postulated Piping Failures	180	3.6.1-2	2009/3/3	N	N	N		-	DCD_3.6.1-2	N/A	N/A
	in Fluid Systems	180	3.6.1-3	2009/3/3	N	N	N		-	DCD_3.6.1-3	N/A	N/A
	Outside Containment	180	3.6.1-4	2009/3/3	Y	N	N		-	DCD_3.6.1-4	3	2
		180	3.6.1-5	2009/3/3	Y	N	N		-	DCD_3.6.1-5	3	2
		180	3.6.1-6	2009/3/3	Y	N	N		-	DCD_3.6.1-6	3	2
		795	03.06.01-7	10/26/2011	Y	N	N		-	DCD_3.6.1-7	1	4
		795	03.06.01-8	10/26/2011	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section No.	SRP Section Title	DCD RAI Response RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status	Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
		795	03.06.01-9	10/26/2011	Y	Y	Y		-	DCD_3.6.1-9	1	4
		884	03.06.01-10	03/09/2012	Y	N	N		-	DCD_3.6.1-10	2	4
3.6.2	Determination of Rupture Locations	71	03.06.02-1	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
	and Dynamic Effects Associated	71	03.06.02-2	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-2	0	2
		71	03.06.02-2	2011/12/27	Y	N	N		-	DCD_03.06.02-2	2	4
	with the Postulated Rupture	71	03.06.02-3	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-3	0	2
	of Piping	71	03.06.02-4	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-5	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-5	0	2
		71	03.06.02-6	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-6	0	2
		71	03.06.02-7	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-7	0	2
		71	03.06.02-8	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-9	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-9	0	2
		71	03.06.02-9	6/20/2012	Y	N	N		-	DCD_03.06.02-9 S01	3	4
		71	03.06.02-10	6/20/2012	Y	N	N		-	-	N/A	N/A
		71	Intro for 03.06.02-10 thru 15	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-10	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-11	2008/11/7	Y	N	N	fin.	-	DCD_03.06.02-11	0	2
		71	03.06.02-12	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-13	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-14	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-14	6/20/2012	Y	N	N		-	-	N/A	N/A
		71	03.06.02-15	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-15	6/20/2012	Y	N	N		-	-	N/A	N/A
		71	03.06.02-16	2008/10/7	Y	N	N	fin.	-	DCD_03.06.02-16	0	2
		71	03.06.02-17	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-18	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		71	03.06.02-19	2008/10/7	Y	N	N	fin.	-	-	-	1
		459	03.06.02-20	2009/10/16	Y	N	N		-	DCD_03.06.02-20	-	2
		459	03.06.02-21	2009/10/16	N	N	N		-	-	N\A	N\A
		459	03.06.02-22	2009/10/16	Y	N	N		-	DCD_03.06.02-22	-	2
		459	03.06.02-23	2009/10/16	Y	N	N		-	DCD_03.06.02-23	-	2
		459	03.06.02-24	2009/10/16	Y	N	N		-	DCD_03.06.02-24	-	2
		459	03.06.02-25	2009/10/16	Y	N	N		-	DCD_03.06.02-25	0	3
		459	03.06.02-26	2009/10/16	N	N	N		-	-	N\A	N\A
		459	03.06.02-27	2009/10/16	Y	N	N		-	DCD_03.06.02-27	-	2
		459	03.06.02-28	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-28	6/20/2012	Y	N	N		-	-	N\A	N\A
		459	03.06.02-29	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-29	6/20/2012	Y	N	N		-	-	N\A	N\A
		459	03.06.02-30	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-31	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-32	2009/12/1	N	N	N		-	-	N\A	N\A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		459	03.06.02-33	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-33	6/20/2012	Y	N	N		-	-	N\A	N\A
		459	03.06.02-34	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-34	6/20/2012	Y	N	N		-	-	N\A	N\A
		459	03.06.02-35	2009/12/1	N	N	N		-	-	N\A	N\A
		459	03.06.02-35	6/20/2012	Y	N	N		-	-	N\A	N\A
		459	03.06.02-36	2009/10/16	N	N	N		-	-	N\A	N\A
		459	03.06.02-37	10/16/2009	Y	N	N		-	DCD_03.06.02-37	-	2
		459	03.06.02-38	10/16/2009	Y	N	N		-	DCD_03.06.02-38	-	2
		459	03.06.02-39	2009/12/1	Y	N	N		-	DCD_03.06.02-39	1	3
		636	03.06.02-40	11/24/2010	N	N	N		-	-	N\A	N\A
		636	03.06.02-40	12/15/2010	Y	N	N		-	DCD_03.06.02-40	7	3
		636	03.06.02-40	6/20/2012	Y	N	N		-	DCD_03.06.02-40	3	4
		636	03.06.02-41	11/24/2010	Y	N	N		-	DCD_03.06.02-41	7	3
		636	03.06.02-41	12/15/2010	Y	N	N		-		7	3
		636	03.06.02-42	11/24/2010	Y	N	N		-	DCD_03.06.02-42	7	3
		636	03.06.02-42	12/15/2010	Y	N	N		-		7	3
		636	03.06.02-43	11/24/2010	Y	N	N		-	DCD_03.06.02-43	7	3
		636	03.06.02-43	12/15/2010	Y	N	N		-		7	3
		636	03.06.02-44	11/24/2010	N	N	N		-	-	N\A	N\A
		636	03.06.02-44	12/15/2010	Y	N	N		-	DCD_03.06.02-44	7	3
		636	03.06.02-44	6/20/2012	Y	N	N		-	DCD_03.06.02-44	3	4
		636	03.06.02-45	11/24/2010	N	N	N		-	-	N\A	N\A
		636	03.06.02-45	12/15/2010	Y	N	N		-	DCD_03.06.02-44	7	3
		636	03.06.02-45	6/20/2012	Y	N	N		-	DCD_03.06.02-45	3	4
		636	03.06.02-46	11/24/2010	N	N	N		-	-	N\A	N\A
		636	03.06.02-46	12/15/2010	N	N	N		-	-	N\A	N\A
		636	03.06.02-46	6/20/2012	Y	N	N		-	DCD_03.06.02-46	3	4
		636	03.06.02-47	11/24/2010	Y	N	N		-	DCD_03.06.02-47	7	3
		636	03.06.02-47	12/15/2010	Y	N	N		-	DCD_03.06.02-47	7	3
		636	03.06.02-47	11/22/2011	Y	N	N		-	DCD_03.06.02-47	1	4
		636	03.06.02-48	11/24/2010	Y	N	N		-	DCD_03.06.02-48	7	3
		636	03.06.02-48	12/15/2010	Y	N	N		-		7	3
3.6.3	Leak-Before-Break	210	3.6.3-1	2009/4/9	Y	N	N		-	DCD_3.6.3-1	3	2
	Evaluation Procedures	210	3.6.3-2	2009/4/23	N	N	N		-	-	N/A	N/A
		210	3.6.3-3	2009/4/23	N	N	N		-	-	N/A	N/A
		210	3.6.3-4	2009/4/9	Y	N	N		-	DCD_3.6.3-4	3	2
		210	3.6.3-5	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-6	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-7	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-8	2009/4/9	Y	N	N		-	DCD_3.6.3-8	3	2
		210	3.6.3-9	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-10	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-11	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-12	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-13	2009/4/9	N	N	N		-	-	N/A	N/A
		210	3.6.3-14	2009/4/9	N	N	N		-	-	N/A	N/A
		217	3.6.3-15	2009/3/24	Y	~~Y~~ part4	N		-	DCD_3.6.3-15	-	2
		217	3.6.3-16	2009/4/23	Y	~~Y~~ part4	N		-	DCD_3.6.3-16	3	2
		415	3.6.3-17	2009/8/3	Y	N	N			DCD_3.6.3-17	4	2
		485	3.6.3-18	2010/1/18	N	N	N		-	-	N/A	N/A
		485	3.6.3-19	2010/1/18	Y	Y	N		-	DCD_3.6.3-19	2	3
		485	3.6.3-20	2010/1/18	N	N	N		-	-	N/A	N/A
		485	3.6.3-21	2010/1/18	Y	N	N		-	DCD_3.6.3-21	2	3
		485	3.6.3-22	2010/1/18	N	N	N		-	-	N/A	N/A
		485	3.6.3-23	2010/1/18	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		485	3.6.3-24	2010/1/18	Y	N	N		-	DCD_3.6.3-24	2	3
		485	3.6.3-25	2010/1/18	N	N	N		-	-	N/A	N/A
		849	03.06.03-26	2011/11/21	N	N	N		-	-	N/A	N/A
3.7.1	Seismic Design Parameters	211	3.7.1-1	2009/3/25	N	N	N		-	-	N/A	N/A
		211	03.07.01-1 RAI 3.7.1-7	2013/3/29	N	N	N		-	-	N/A	N/A
		211	3.7.1-2	2009/3/25	N	N	N		-	-	N/A	N/A
		211	3.7.1-3	2009/4/23	N	N	N		-	-	N/A	N/A
		211	3.7.1-4	2009/3/25	Y	N	N		-	DCD_3.7.1-4	2	2
		211	03.07.01-1 RAI 3.7.1-5	2009/4/23	Y	N	N		-	DCD_3.7.1-5	3	2
		211	03.07.01-1 RAI 3.7.1-5	2013/1/31	N	N	N		-	-	N/A	N/A
		211	3.7.1-6	2009/4/23	N	N	N		-	-	N/A	N/A
		211	3.7.1-7	2009/4/23	N	N	N		-	-	N/A	N/A
		494	03.07.01-2	2010/1/29	N	N	N		-	-	N/A	N/A
		494	03.07.01-2	2013/3/29	N	N	N		-	-	N/A	N/A
		494	03.07.01-3	2010/1/29	N	N	N		-	-	N/A	N/A
		494	03.07.01-4	2010/1/29	Y	Y	N		-	DCD_03.07.01-4	2	3
		602	03.07.01-5	2010/7/27	N	N	N		-	-	N/A	N/A
		643	03.07.01-6	XX/YY/2010								
		643	03.07.01-7	2013/1/31	N	N	N		-	-	N/A	N/A
		643	03.07.01-8	XX/YY/2010								
		643	03.07.01-9	2013/1/31	N	N	N		-	-	N/A	N/A
		643	03.07.01-10	XX/YY/2010								
		643	03.07.01-1 RAI 03.07.01-12	2013/3/29	N	N	N		-	-	N/A	N/A
		643	03.07.01-6	2010/11/11	Y	Y	N		-	DCD_03.07.01-6	6	3
		643	03.07.01-7	2010/11/11	N	N	N		-	-	N/A	N/A
		643	03.07.01-8	2010/11/11	N	N	N		-	-	N/A	N/A
		643	03.07.01-9	2010/11/11	N	N	N		-	-	N/A	N/A
		643	03.07.01-10	2010/11/11	N	N	N		-	-	N/A	N/A
		659	03.07.01-11 RAI 3.7.1-17	2010/12/28	N	N	N		-	-	N/A	N/A
		659	03.07.01-11 RAI 3.7.1-17	2011/6/23	N	N	N		-	-	N/A	N/A
		659	03.07.01-11 RAI 3.7.1-17	2013/1/31	N	N	N		-	-	N/A	N/A
		659	03.07.01-12 RAI 3.7.1-18	2010/12/28	N	N	N		-	-	N/A	N/A
		659	03.07.01-12 RAI 3.7.1-18	2013/1/31	N	N	N		-	-	N/A	N/A
		709	03.07.01-13 RAI 3.7.1-17	2011/4/19	Y	N	N		-	DCD_03.07.01-13	0	4
		709	03.07.01-13 RAI 3.7.1-17	2013/1/31	N	N	N		-	-	N/A	N/A
		798	03.07.01-14	2011/9/7	Y	N	N		-	DCD_03.07.01-14	2	4
		798	03.07.01-14	2013/1/31	N	N	N		-	-	N/A	N/A
		798	03.07.01-15	2011/9/7	Y	N	N		-	DCD_03.07.01-15	2	4
		798	03.07.01-15	2013/1/31	N	N	N		-	-	N/A	N/A
		798	03.07.01-16	2011/9/7	N	N	N		-	-	N/A	N/A
		798	03.07.01-16	2013/1/31	N	N	N		-	-	N/A	N/A
		798	03.07.01-17	2011/12/7	N	N	N		-	-	N/A	N/A
		798	03.07.01-17	2013/1/31	N	N	N		-	-	N/A	N/A
		821	03.07.01-18	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-19	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-19	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-20	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-21	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-22	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-23	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-23	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-24	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-24	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-25	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-25	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-26	12/01/2011	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		850	03.07.01-26	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-27	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-27	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-28	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-28	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-29	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-29	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-30	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-30	2013/1/31	N	N	N		-	-	N/A	N/A
		850	03.07.01-31	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-32	12/01/2011	N	N	N		-	-	N/A	N/A
		850	03.07.01-32	2013/1/31	N	N	N		-	-	N/A	N/A
		886	03.07.01-33	02/24/2012	N	N	N		-	-	N/A	N/A
		886	03.07.01-33	2/27/2013	N	N	N		-	-	N/A	N/A
		939	03.07.01-34	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-34	9/21/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-35	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-36	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-36	9/21/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-37	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-37	9/21/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-38	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-38	9/21/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-38	7/8/2013	N	N	N		-	-	N/A	N/A
		939	03.07.01-39	07/19/2012	N	N	N		-	-	N/A	N/A
		939	03.07.01-39	9/21/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-40	7/19/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-40	9/21/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-41	7/19/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-41	9/21/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-42	7/19/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-42	9/21/2012	N	N	N		-	-	N/A	N/A
		940	03.07.01-43	9/21/2012	N	N	N		-	-	N/A	N/A
		1047	03.07.01-44	9/13/2013	N	N	N		-	-	N/A	N/A
		1047	03.07.01-44	11/8/2013	Y	N	N		-	DCD_03.07.01-44	0	
		1047	03.07.01-45	9/13/2013	N	N	N		-	-	N/A	N/A
3.7.2	Seismic System Analysis	212	3.7.2-1/ RAI 3.7.2-1	2009/5/7	Y	N	N		-	DCD_3.7.2-1	3	2
		212	3.7.2-1/ RAI 3.7.2-1	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-2	2009/3/30	Y	N	N		-	DCD_3.7.2-2	2	2
		212	3.7.2-1/ RAI 3.7.2-2	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-3	2009/5/7	Y	N	N		-	DCD_3.7.2-3	6	3
		212	3.7.2-1/ RAI 3.7.2-4	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-5	2009/5/7	Y	N	N		-	DCD_3.7.2-5	3	2
		212	3.7.2-1/ RAI 3.7.2-5	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-6	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-6	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-7	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-7	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-8	2009/3/30	Y	N	N		-	DCD_3.7.2-8	-	2
		212	3.7.2-1/ RAI 3.7.2-9	2009/3/30	Y	N	N		-	DCD_3.7.2-9	2	2
		212	3.7.2-1/ RAI 3.7.2-9	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-10	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-11	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-12	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-13	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-13	2013/3/29	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-14	2009/3/30	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-14	2013/3/29	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-15	2009/5/7	Y	N	N		-	DCD_3.7.2-15	-	2
		212	3.7.2-1/ RAI 3.7.2-15	2013/1/31	N	N	N		-	-	N/A	N/A
		212	3.7.2-1/ RAI 3.7.2-16	2009/3/30	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		212	3.7.2-1/ RAI 3.7.2-16	1/31/2013	N	N	N		-	-	N/A	N/A
		495	03.07.02-2	2010/2/2	N	N	N		-	-	N/A	N/A
		495	03.07.02-2	2013/1/31	N	N	N		-	-	N/A	N/A
		495	03.07.02-3A	2010/2/2	N	N	N		-	-	N/A	N/A
		495	03.07.02-4	2010/2/2	Y	N	N		-	DCD_03.07.02-4	-	N/A
		495	03.07.02-4	2013/1/31	N	N	N		-	-	N/A	N/A
		495	03.07.02-5	2010/2/2	Y	N	N		-	DCD_03.07.02-5	2	3
		495	03.07.02-5	2/27/2013	N	N	N		-	-	N/A	N/A
		542	03.07.02-6	2010/3/30	N	N	N		-	-	N/A	N/A
		542	03.07.02-7	2010/3/30	N	N	N		-	-	N/A	N/A
		542	03.07.02-7 RAI 03.07.02-34	2/27/2013	N	N	N		-	-	N/A	N/A
		542	03.07.02-8	2010/3/30	N	N	N		-	-	N/A	N/A
		542	03.07.02-8	2011/6/30	Y	N	Y		-	DCD_03.07.02-35	0	4
		542	03.07.02-8 RAI 03.07.02-35	2013/1/31	N	N	N		-	-	N/A	N/A
		603	03.07.02-9	2010/7/27	N	N	N		-	-	N/A	N/A
		603	03.07.02-10	2010/8/30	N	N	N		-	-	N/A	N/A
		625	03.07.02-11/RAI 3.7.2-38	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-12/RAI 3.7.2-39	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-13/RAI 3.7.2-40	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-14/RAI 3.7.2-41	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-15/RAI 3.7.2-42	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-16/RAI 3.7.2-43	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-17/RAI 3.7.2-44	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-18/RAI 3.7.2-45	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-19/RAI 3.7.2-46	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-20/RAI 3.7.2-47	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-20/RAI 3.7.2-47	2013/1/31	N	N	N		-	-	N/A	N/A
		625	03.07.02-21/RAI 3.7.2-48	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-22/RAI 3.7.2-49	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-23/RAI 3.7.2-50	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-23/RAI 3.7.2-50	2013/1/31	N	N	N		-	-	N/A	N/A
		625	03.07.02-24/RAI 3.7.2-51	2010/11/4	N	N	N		-	-	N/A	N/A
		625	03.07.02-24/RAI 3.7.2-51	2013/1/31	N	N	N		-	-	N/A	N/A
		212	03.07.02-17	2009/5/7	N	N	N		-	-	N/A	N/A
		212	03.07.01-1 RAI 03.07.02-17	2013/1/31	N	N	N		-	-	N/A	N/A
		212	03.07.02-18	2009/5/7	N	N	N		-	-	N/A	N/A
		212	03.07.02-19	2009/5/7	N	N	N		-	-	N/A	N/A
		212	03.07.02-20	2009/5/7	Y	N	N		-	-	3	2
		212	03.07.02-1 RAI 03.07.02-20	2013/1/31	N	N	N		-	-	N/A	N/A
		212	03.07.02-21	2009/3/30	N	N	N		-	-	N/A	N/A
		212	03.07.02-1 RAI 03.07.02-21	2013/1/31	N	N	N		-	-	N/A	N/A
		212	03.07.02-22	2009/3/30	Y	N	N		-	-	2	2
		212	03.07.02-1 RAI 03.07.02-23	2009/3/30	N	N	N		-	-	N/A	N/A
		212	03.07.02-1 RAI 03.07.02-23	2/27/2013	N	N	N		-	-	N/A	N/A
		212	03.07.02-1 RAI 03.07.02-24	2009/5/7	Y	N	N		-	-	3	2
		212	03.07.02-1 RAI 03.07.02-24	2013/3/29	N	N	N		-	-	N/A	N/A
		212	03.07.02-1 RAI 03.07.02-25	2009/3/30	N	N	N		-	-	N/A	N/A
		212	03.07.02-1 RAI 03.07.02-25	2/27/2013	N	N	N		-	-	N/A	N/A
		212	03.07.02-26	2009/3/30	Y	N	N		-	-	2	2
		212	03.07.02-27	2009/5/7	Y	N	N		-	-	3	2
		212	03.07.02-1 RAI 03.07.02-27	2013/1/31	N	N	N				N/A	N/A
		212	03.07.02-28	2009/3/30	Y	N	N		-	-	2	2
		660	03.07.02-25 /RAI 3.7.2-52	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-25 /RAI 3.7.2-52	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-26 /RAI 3.7.2-53	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-26 /RAI 3.7.2-53	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-27 /RAI 3.7.2-54	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-27 /RAI 3.7.2-54	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-28 /RAI 3.7.2-55	2010/12/28	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		660	03.07.02-29 /RAI 3.7.2-56	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-30 /RAI 3.7.2-57	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-30 /RAI 3.7.2-57	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-31 /RAI 3.7.2-58	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-31 /RAI 3.7.2-58	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-32 /RAI 3.7.2-59	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-32 /RAI 3.7.2-59	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-33 /RAI 3.7.2-60	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-33 /RAI 3.7.2-60	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-34 /RAI 3.7.2-61	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-34 /RAI 3.7.2-61	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-35 /RAI 3.7.2-62	2010/12/28	N	N	N		-	-	N/A	N/A
		660	03.07.02-35 /RAI 3.7.2-62	2013/3/29	N	N	N		-	-	N/A	N/A
		660	03.07.02-36 /RAI 3.7.2-63	2010/12/28	Y	N	N			DCD_03.07.02-63	7	3
		660	03.07.02-36 /RAI 3.7.2-63	2013/1/31	N	N	N		-	-	N/A	N/A
		660	03.07.02-37 /RAI 3.7.2-64	2010/12/28	N	N	N		-		N/A	N/A
		660	03.07.02-37 /RAI 3.7.2-64	2013/1/31	N	N	N		-		N/A	N/A
		660	03.07.02-38 /RAI 3.7.2-65	2010/12/28	Y	N	N			DCD_03.07.02-65	7	3
		660	03.07.02-38 /RAI 3.7.2-65	2013/1/31	N	N	N		-	-	N/A	N/A
		660	09.07.02-39/RAI 3.7.2-68	2010/12/28	N	N	N		-	-	N/A	N/A
		660	09.07.02-39/RAI 3.7.2-68	2/27/2013	N	N	N		-	-	N/A	N/A
		766	03.07.02-40	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-40	2011/11/116	N	N	N		-	-	N/A	N/A
		766	03.07.02-40	5/31/2013	N	N	N		-	-	N/A	N/A
		766	03.07.02-41	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-41	3/26/2013	N	N	N		-	-	N/A	N/A
		766	03.07.02-42	2011/11/116	N	N	N		-	-	N/A	N/A
		766	03.07.02-42	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-43	2011/11/116	N	N	N		-	-	N/A	N/A
		766	03.07.02-43	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-44	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-44	2011/11/116	N	N	N		-	-	N/A	N/A
		766	03.07.02-44	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-45	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-45	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-46	2011/8/1	N.	N	N		-	-	N/A	N/A
		766	03.07.02-46	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-46	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-47	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-47	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-48	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-48	5/31/2013	N	N	N		-	-	N/A	N/A
		766	03.07.02-49	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-49	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-50	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-50	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-50	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-51	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-51	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-52	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-52	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-52	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-53	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-53	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-54	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-54	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-55	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-55	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-56	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-57	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-57	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-58	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-58	2013/3/26	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		766	03.07.02-59	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-59	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-60	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-60	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-60	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-61	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-61	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-61	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-62	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-62	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.03-63	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.03-63	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-64	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-64	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-65	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-65	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-66	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-66	2011/11/16	N	N	N		-	-	N/A	N/A
		766	03.07.02-66	2013/3/26	N	N	N		-	-	N/A	N/A
		766	03.07.02-67	2011/8/1	N	N	N		-	-	N/A	N/A
		766	03.07.02-67	2013/3/26	N	N	N		-	-	N/A	N/A
		776	03.07.02-68	2011/8/12	N	N	N		-	-	N/A	N/A
		776	03.07.02-68	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-69	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-70	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-71	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-72	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-73	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-74	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-75	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-76	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-77	2011/8/12	N	N	N		-	-	N/A	N/A
		776	03.07.02-77	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-78	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-79	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-80	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-81	8/12/2011	N	N	N		-	-	N/A	N/A
		776	03.07.02-81	2013/1/31	N	N	N		-	-	N/A	N/A
		776	03.07.02-83	8/12/2011	N	N	N		-	-	N/A	N/A
		776	03.07.02-83	7/8/2013	N	N	N		-	-	N/A	N/A
		776	03.07.02-84	2013/1/31	N	N	N		-	-	N/A	N/A
		791	03.07.02-85	2013/1/31	N	N	N		-	-	N/A	N/A
		800	03.07.02-86	9/7/2011	N	N	N		-	-	N/A	N/A
		800	03.07.02-87	9/7/2011	N	N	N		-	-	N/A	N/A
		800	03.07.02-88	9/7/2011	Y	Y	N		-	DCD_03.07.02-88	2	4
		800	03.07.02-89	9/7/2011	N	N	N		-	-	N/A	N/A
		800	03.07.02-90	11/01/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-91	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-91	2013/1/31	N	N	N		-	-	N/A	N/A
		810	03.07.02-92	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-92	2013/1/31	N	N	N		-	-	N/A	N/A
		810	03.07.02-93	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-93	2013/3/29	N	N	N		-	-	N/A	N/A
		810	03.07.02-94	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-95	11/22/2011	Y	N	N		-	DCD_03.07.02-95	2	4
		810	03.07.02-95	2013/1/31	N	N	N		-	-	N/A	N/A
		810	03.07.02-96	11/22/2011	Y	N	N		-	DCD_03.07.02-96	2	4
		810	03.07.02-97	2011/9/22	Y	N	N		-	DCD_03.07.02-97	2	4
		810	03.07.02-98	11/22/2011	Y	N	N		-	DCD_03.07.02-98	2	4
		810	03.07.02-98	2013/3/29	N	N	N		-	-	N/A	N/A
		810	03.07.02-99	2011/9/22	N	N	N		-	-	N/A	N/A
		810	03.07.02-100	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-100	2013/1/31	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		810	03.07.02-101	11/22/2011	Y	N	N		-	DCD_03.07.02-101	2	4
		810	03.07.02-102	2011/9/22	Y	Y	Y		-	DCD_03.07.02-102	2	4
		810	03.07.02-102	2013/1/31	N	N	N		-	-	N/A	N/A
		810	03.07.02-103	11/22/2011	Y	N	N		-	DCD_03.07.02-103	2	4
		810	03.07.02-103	2013/1/31	N	N	N		-	-	N/A	N/A
		810	03.07.02-104	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-105	11/22/2011	N	N	N		-	-	N/A	N/A
		810	03.07.02-106	2011/9/22	Y	N	N		-	DCD_03.07.02-106	2	4
		810	03.07.02-107	2011/9/22	Y	Y	Y		-	DCD_03.07.02-107	2	4
		810	03.07.02-108-1	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-2	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-3	2011/11/30	Y	N	N		-	DCD_03.07.02-108(3)	2	4
		810	03.07.02-108-4	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-5	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-6	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-7	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-8	2011/11/30	Y	N	N		-	DCD_03.07.02-108(8)	2	4
		810	03.07.02-108-9	2011/11/30	Y	N	N		-	DCD_03.07.02-108(9)	2	4
		810	03.07.02-108-10	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-11	2011/11/30	N	N	N		-	DCD_03.07.02-108(11	2	4
		810	03.07.02-108-12	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-13	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-14	2011/11/30	N	N	N		-	-	N/A	N/A
		810	03.07.02-108-15	2011/11/30	Y	N	N		-	DCD_03.07.02-108(15	2	4
		810	03.07.02-108	2013/1/31	N	N	N		-	-	N/A	N/A
		812	03.07.02-109	2/27/2013	N	N	N		-	-	N/A	N/A
		852	03.07.02-110	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-111	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-112	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-113	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-113	1/10/2014	N	N	N		-	-	N/A	N/A
		852	03.07.02-114	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-115	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-116	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-117	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-118	2013/3/29	N	N	N		-	-	N/A	N/A
		852	03.07.02-119	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-120	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-121	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-122	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-123	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-124	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-125	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-126	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-127	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-128	2013/3/29	N	N	N		-	-	N/A	N/A
		852	03.07.02-129	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-130	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-131	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-132	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-133	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-134	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-135	2013/1/31	N	N	N		-	-	N/A	N/A
		852	03.07.02-136	10/16/2013	N	N	N		-	-	N/A	N/A
		852	03.07.02-137	10/16/2013	N	N	N		-	-	N/A	N/A
		852	03.07.02-138	2013/1/31	N	N	N		-	-	N/A	N/A
		853	03.07.02-139	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-140	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-141	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-142	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-143	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-144	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-145	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-146	2/27/2013	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		853	03.07.02-147	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-148	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-149	2/27/2013	N	N	N		-	-	N/A	N/A
		853	03.07.02-150	2/27/2013	N	N	N		-	-	N/A	N/A
		854	03.07.02-151	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-152	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-153	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-154	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-155	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-155	2/27/2013	N	N	N		-	-	N/A	N/A
		854	03.07.02-156	2/27/2013	N	N	N		-	-	N/A	N/A
		854	03.07.02-157	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-158	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-159	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-160	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-161	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-162	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-163	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-164	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-165	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-166	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-167	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-168	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-169	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-170	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-171	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-172	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-173	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-174	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-175	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-176	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-177	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-178	2013/1/31	N	N	N		-	-	N/A	N/A
		854	03.07.02-179	2013/1/31	N	N	N		-	-	N/A	N/A
		909	03.07.02-180	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-181	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-181	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-182	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-182	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-183	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-183	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-184	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-184	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-185	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-185	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-186	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-186	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-187	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-187	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-188	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-188	5/31/2013	N	N	N		-	-	N/A	N/A
		909	03.07.02-189	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-189	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-190	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-190	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-191	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-191	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-192	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-192	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-193	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-193	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-194	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-195	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-195	2013/3/26	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		909	03.07.02-196	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-196	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-197	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-197	5/31/2013	N	N	N		-	-	N/A	N/A
		909	03.07.02-198	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-198	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-199	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-199	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-200	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-200	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-201	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-201	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-202	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-202	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-203	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-203	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-204	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-204	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-205	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-205	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-206	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-206	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-207	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-207	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-208	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-208	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-209	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-209	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-210	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-210	2013/3/26	N	N	N		-	-	N/A	N/A
		909	03.07.02-211	6/5/2012	N	N	N		-	-	N/A	N/A
		909	03.07.02-211	2013/3/26	N	N	N		-	-	N/A	N/A
		960	03.07.02-212	12/19/2012	N	N	N		-	-	N/A	N/A
		960	03.07.02-212	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-213	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-214	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-215	12/19/2012	N	N	N		-	-	N/A	N/A
		960	03.07.02-215	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-216	12/19/2012	N	N	N		-	-	N/A	N/A
		960	03.07.02-216	4/30/2013	N	N	N		-	-	N/A	N/A
		960	03.07.02-216	2013/12/13	N	N	N		-	-	N/A	N/A
		960	03.07.02-217	12/19/2012	N	N	N		-	-	N/A	N/A
		960	03.07.02-217	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-218	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-219	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-219	12/4/2013	N	N	N		-	-	N/A	N/A
		960	03.07.02-220	12/19/2012	N	N	N		-	-	N/A	N/A
		960	03.07.02-220	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-221	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-222	2013/3/29	N	N	N		-	-	N/A	N/A
		960	03.07.02-223	2013/3/29	N	N	N		-	-	N/A	N/A
		1018	03.07.02-224	7/19/2013	Y	N	N		-	DCD_03.07.02-224	-	4
		1018	03.07.02-224	12/09/2013	Y	N	N		-	DCD_03.07.02-224	N/A	N/A
		1025	03.07.02-225	8/2/2012	N	N	N		-	-	N/A	N/A
		1025	03.07.02-226	6/28/2013	N	N	N		-	-	N/A	N/A
		1050	03.07.02-227	1/10/2014	N	N	N		-	-	N/A	N/A
		1050	03.07.02-230	12/27/2013	Y	N	N		-	DCD_03.07.02-230	0	
3.7.3	Seismic Subsystem Analysis	213	03.07.03-1 RAI 3.7.3-01	2009/3/27	Y	N	N		-	DCD_3.7.3-01	2	2

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		213	03.07.03-1 RAI 3.7.3-02	2009/3/27	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-03	2009/4/24	Y	N	N		-	DCD_3.7.3-03	3	2
		213	03.07.03-1 RAI 3.7.3-04	2009/4/24	Y	N	N		-	DCD_3.7.3-04	3	2
		213	03.07.03-1 RAI 3.7.3-05	2009/3/27	Y	N	N		-	DCD_3.7.3-05	2	2
		213	03.07.03-1 RAI 3.7.3-05	2013/1/31	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-06	2009/4/24	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-07	2009/3/27	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-08	2009/3/27	Y	N	N		-	DCD_3.7.3-08	2	2
		213	03.07.03-1 RAI 3.7.3-09	2009/3/27	Y	N	N		-	DCD_3.7.3-09	2	2
		213	03.07.03-1 RAI 3.7.3-10	2009/3/27	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-11	2009/3/27	Y	N	N		-	DCD_3.7.3-11	2	2
		213	03.07.03-1 RAI 3.7.3-12	2009/4/24	Y	N	N		-	DCD_3.7.3-12	3	2
		213	03.07.03-1 RAI 3.7.3-13	2009/3/27	Y	N	N		-	DCD_3.7.3-13	-	2
		213	03.07.03-1 RAI 3.7.3-14	2009/4/24	N	N	N		-	-	N/A	N/A
		213	03.07.03-1 RAI 3.7.3-15	2009/4/24	N	N	N		-	-	N/A	N/A
		493	03.07.03-2	2010/1/28	Y	N	N		-	DCD_03.07.03-2	2	3
		493	03.07.03-3	2010/1/28	N	N	N		-	-	N/A	N/A
		493	03.07.03-4	2010/1/28	N	N	N		-	-	N/A	N/A
		493	03.07.03-5	2010/1/28	Y	N	N		-	DCD_03.07.03-5	2	3
		799	03.07.03-6	2011/9/7	Y	N	N		-	DCD_3.7.3-6	2	4
		799	03.07.03-7	2011/10/7	Y	N	N		-	DCD_03.07.03-7	2	4
		799	03.07.03-8	2011/9/7	N	N	N		-	-	N/A	N/A
		799	03.07.03-9	2011/9/7	N	N	N		-	-	N/A	N/A
		799	03.07.03-10	2011/10/7	Y	N	N		-	DCD_03.07.03-10	2	4
		799	03.07.03-11	2011/10/7	Y	N	N		-	DCD_03.07.03-10	2	4
		213	3.7.3-09 SUPP	2010/6/30	Y	N	N		-	DCD_3.7.3-09	4	3
		950	03.07.03-12	9/18/2012	N	Y	Y		-	DCD_03.07.03-12	N/A	N/A
		950	03.07.03-12	8/7/2013	Y	Y	N		-	DCD_03.07.03-12	0	
		950	03.07.03-12	10/16/2013	Y	Y	N		-	DCD_03.07.03-12	0	
3.7.4	Seismic Instrumentation	55	03.07.04-1	2008/9/1	Y	N	N	fin.	-	DCD_03.07.04-1	0	2
		55	03.07.04-2	2008/9/1	Y	N	N	fin.	-	DCD_03.07.04-2	0	2
		538	03.07.04-03	2010/3/30	Y	N	N		-	DCD_03.07.04-03	6	3
		632	03.07.04-04	2010/10/19	Y	Y	N		-	DCD_03.07.04-04	6	3
		-	-	-	-	-	-	-	COL3.7(15) deleted	MAP-03-001	-	2
		-	-	-	-	-	-	-	COL3.7(18) deleted	MAP-03-002	-	2
3.8.1	Concrete Containment	223	3.8.1-1	2009/4/14	Y	N	N		-	DCD_3.8.1-1	3	2
		223	3.8.1-2	2009/4/14	N	N	N		-	-	N/A	N/A
		223	3.8.1-3	2009/4/14	N	N	N		-	-	N/A	N/A
		223	03.08.01-03	10/16/2013	N	N	N		-	-	N/A	N/A
		223	3.8.1-4	2009/4/14	N	N	N		-	-	N/A	N/A
		223	3.8.1-5	2009/4/14	Y	N	N		-	DCD_3.8.1-5	3	2
		223	3.8.1-6	2009/4/14	N	N	N		-	-	N/A	N/A
		223	3.8.1-7	2009/4/14	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		223	03.08.01-7	7/8/2013	Y	N	N		-	DCD_03.08.01-7	-	4
		223	03.08.01-1 RAI 3.8.1-8	2009/4/14	N	N	N		-	-	N/A	N/A
		223	03.08.01-1 RAI 3.8.1-8	2013/1/31	N	N	N		-	-	N/A	N/A
		223	3.8.1-9	2009/4/14	N	N	N		-	-	N/A	N/A
		490	03.08.01-9	1/10/2014	N	N	N		-	-	N/A	N/A
		223	3.8.1-10	2009/4/14	N	N	N		-	-	N/A	N/A
		223	3.8.1-11	2009/4/14	N	N	N		-	-	N/A	N/A
		223	3.8.1-12	2009/4/24	Y	N	N		-	DCD_3.8.1-12	3	2
		223	3.8.1-13	2009/4/24	Y	N	N		-	DCD_3.8.1-13	3	2
		223	3.8.1-14	2009/4/14	Y	N	N		-	DCD_3.8.1-14	3	2
		-	-	-	-	-	-	-	COL3.8(1) deleted	MAP-03-003	-	2
		-	-	-	-	-	-	-	COL3.8(2) deleted	MAP-03-004	0	2, 3
		-	-	-	-	-	-	-	COL3.8(4) deleted	MAP-03-005	-	2
		-	-	-	-	-	-	-	COL3.8(5) deleted	MAP-03-006	-	2
		-	-	-	-	-	-	-	COL3.8(6) deleted	MAP-03-007	-	2
		-	-	-	-	-	-	-	COL3.8(8) deleted	MAP-03-008	-	2
		-	-	-	-	-	-	-	COL3.8(9) deleted	MAP-03-009	-	2
		-	-	-	-	-	-	-	COL3.8(12) deleted	MAP-03-010	-	2
		-	-	-	-	-	-	-	COL3.8(13) deleted	MAP-03-011	-	2
		490	03.08.01-2	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-02	8/30/2013	N	N			-	-	N/A	N/A
		490	03.08.01-3	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-3	2013/10/16	N	N	N		-	-	N/A	N/A
		490	03.08.01-4	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-5	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-6	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-7	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-8	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-8	2013/1/31	N	N	N		-	-	N/A	N/A
		490	03.08.01-9	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-9	7/8/2013	N	N	N		-	-	N/A	N/A
		490	03.08.01-10	2010/2/4	N	N	N		-	-	N/A	N/A
		490	03.08.01-10	7/8/2013	N	N	N		-	-	N/A	N/A
		661	03.08.01-11	8/13/2013	N	N	N		-	-	N/A	N/A
		661	03.08.01-12	XX/YY/2010								
		661	3.08.01-13 RAI 03.08.01-2	2013/1/31	N	N	N		-	-	N/A	N/A
		768	03.08.01-14	2011/7/25	Y	N	N		-	DCD_03.08.01-14	1	4
		1040	03.08.01-15	8/2/2013	Y	N	N		-	DCD_03.08.01-15	0	
		1040	03.08.01-16	8/2/2013	N	N	N		-	-	N/A	N/A
		1040	03.08.01-17	8/2/2013	N	N	N		-	-	N/A	N/A
		1040	03.08.01-17	01/10/2014	Y	N	N		-	DCD_03.08.01-17	0	
		1040	03.08.01-18	8/2/2013	Y	N	N		-	DCD_03.08.01-18	0	
		1040	03.08.01-19	8/2/2013	Y	N	N		-	DCD_03.08.01-19	0	
		1040	03.08.01-20	8/2/2013	Y	N	N		-	DCD_03.08.01-20	0	
		1040	03.08.01-21	8/2/2013	N	N	N		-	-	N/A	N/A
		1040	03.08.01-22	8/30/2013	Y	N			-	DCD_03.08.01-22	0	
		1040	03.08.01-21	01/10/2014	N	N	N		-	-	N/A	N/A
		661	03.08.01-24	2010/12/28	Y	N	N		-	DCD_03.08.01-24	7	3
		661	03.08.01-25	2010/12/28	N	N	N		-	-	N/A	N/A
		661	03.08.01-26	2010/12/28	N	N	N		-	-	N/A	N/A
3.8.3	Concrete and Steel	322	3.8.3-1	2009/6/4	N	N	N		-	-	N/A	N/A
	Internal Structures	322	3.8.3-1	2009/9/17	N	N	N		-	-	N/A	N/A
	of Steel or Concrete Containments	322	3.8.3-2	2009/5/21	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		322	3.8.3-2	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-3	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-3	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-4	2009/5/21	Y	N	N		-	DCD_3.8.3-4	3	2
		322	3.8.3-4	2009/9/17	Y	N	N		-	DCD_3.8.3-4	3	2
		322	3.8.3-5	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-5	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-6	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-6	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-7	2009/6/4	N	N	N		-	-	N/A	N/A
		322	3.8.3-7	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-8	2009/6/4	N	N	N		-	-	N/A	N/A
		322	3.8.3-8	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-8	2013/3/29	N	N	N		-	-	N/A	N/A
		322	3.8.3-9	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-9	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-10	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-10	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-11	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-11	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-12	2009/5/21	N	N	N		-	-	N/A	N/A
		322	3.8.3-12	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-13	2009/6/4	N	N	N		-	-	N/A	N/A
		322	3.8.3-13	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-14	2009/6/4	N	N	N		-	-	N/A	N/A
		322	3.8.3-14	2009/9/17	N	N	N		-	-	N/A	N/A
		322	3.8.3-15	2009/6/4	N	N	N		-	-	N/A	N/A
		322	3.8.3-15	2009/9/17	N	N	N		-	-	N/A	N/A
		491	03.08.03-16	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-17	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-17	2011/4/12	N	N	N		-	-	N/A	N/A
		491	03.08.03-17	2011/7/5	N	N	N		-	-	N/A	N/A
		491	03.08.03-18	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-19	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-20	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-21	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-22	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-23	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-24	2010/3/3	N	N	N		-	-	N/A	N/A
		491	03.08.03-25	2010/3/3	N	N	N		-	-	N/A	N/A
		662	03.08.03-26	2010/12/28	Y	N	N		-	DCD_03.08.03-26	TBD	
		662	03.08.03-26	2013/3/29	N	N	N		-	-	N/A	N/A
		662	03.08.03-27	2010/12/28	N	N	N		-	-	N/A	N/A
		662	03.08.03-28	2010/12/28	N	N	N		-	-	N/A	N/A
		662	03.08.03-28	12/5/2012	N	N	N		-	-	N/A	N/A
		662	03.08.03-29	2010/12/28	N	N	N		-	-	N/A	N/A
		662	03.08.03-29	7/8/2013	N	N	N		-	-	N/A	N/A
		662	03.08.03-30	2010/12/28	N	N	N		-	-	N/A	N/A
		662	03.08.03-30	4/26/2013	N	N	N		-	-	N/A	N/A
		662	03.08.03-31	2010/12/28	N	N	N		-	-	N/A	N/A
		662	03.08.03-32	2010/12/28	Y	N	N		-	DCD_03.08.03-32	TBD	
		662	03.08.03-32	2013/3/29	N	N	N		-	-	N/A	N/A
		676	03.08.03-33	XX/YY/2010								
		676	03.08.03-34	XX/YY/2010								
		676	03.08.03-35	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-36	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-37	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-37	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-38	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-39	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-40	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-41	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-42	2/24/2012	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		858	03.08.03-43	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-44	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-44	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-45	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-45	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-46	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-46	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-47	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-47	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-48	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-48	10/16/2013	N	N	N		-	-	N/A	N/A
		858	03.08.03-49	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-50	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-50	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-51	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-52	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-53	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-53	2013/3/29	N	N	N		-	-	N/A	N/A
		858	03.08.03-54	2/24/2012	N	N	N		-	-	N/A	N/A
		858	03.08.03-55	2/24/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-56	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-56	2013/3/29	N	N	N		-	-	N/A	N/A
		894	03.08.03-57	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-58	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-59	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-60	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-61	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-62	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-63	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-63	10/16/2013	N	N	N		-	-	N/A	N/A
		894	03.08.03-64	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-65	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-66	4/2/2012	N	N	N		-	-	N/A	N/A
		894	03.08.03-66	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-67	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-67	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-68	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-68	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-69	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-69	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-70	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-71	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-71	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-72	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-72	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-73	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-74	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-74	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-75	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-75	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-76	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-77	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-77	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-77	1/10/2014	N	N	N		-	-	N/A	N/A
		905	03.08.03-78	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-78	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-79	5/16/2012	N	N	N		-	-	N/A	N/A
		905	03.08.03-79	2013/3/29	N	N	N		-	-	N/A	N/A
		905	03.08.03-80	5/16/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-81	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-81	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-82	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-82	2013/3/29	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		931	03.08.03-83	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-83	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-84	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-84	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-85	8/20/2012	Y	N	N		-	-	N/A	N/A
		931	03.08.03-85	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-86	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-86	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-87	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-87	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-88	8/20/2012	N	N	N		-	-	N/A	N/A
		931	03.08.03-88	2013/3/29	N	N	N		-	-	N/A	N/A
		931	03.08.03-89	8/20/2012	N	N	N		-	-	N/A	N/A
		958	03.08.03-90	2013/3/29	N	N	N		-	-	N/A	N/A
		958	03.08.03-91	2013/3/29	N	N	N		-	-	N/A	N/A
		958	03.08.03-92	2013/3/29	N	N	N		-	-	N/A	N/A
		958	03.08.03-93	11/19/2012	N	N	N		-	-	N/A	N/A
		958	03.08.03-93	2013/3/29	N	N	N		-	-	N/A	N/A
		958	03.08.03-94	10/16/2013	Y	N	N		-	DCD_03.08.03-94	0	
		958	03.08.03-95	11/19/2012	Y	N	N		-	-	N/A	N/A
		958	03.08.03-95	2013/3/29	N	N	N		-	-	N/A	N/A
		958	03.08.03-96	11/19/2012	Y	N	N		-	-	N/A	N/A
		958	03.08.03-96	10/16/2013	Y	N	N		-	DCD_03.08.03-96	0	
		977	03.08.03-97	10/16/2013	N	N	N		-	-	N/A	N/A
		977	03.08.03-98	10/16/2013	N	N	N		-	-	N/A	N/A
		977	03.08.03-99	10/16/2013	N	N	N		-	-	N/A	N/A
		977	03.08.03-100	2013/3/29	N	N	N		-	-	N/A	N/A
		977	03.08.03-101	2013/3/29	N	N	N		-	-	N/A	N/A
		985	03.08.03-102	5/31/2013	Y	N	N		-	DCD_03.08.03_102	5	4
		985	03.08.03-103	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-104	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-104	1/10/2014	N	N	N		-	-	N/A	N/A
		985	03.08.03-105	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-106	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-107	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-108	5/31/2013	N	N	N		-	-	N/A	N/A
		985	03.08.03-109	5/31/2013	N	N	N		-	-	N/A	N/A
		1023	03.08.03-110	7/8/2013	N	N	N		-	-	N/A	N/A
		1024	03.08.03-111	10/16/2013	Y	N	N		-	-	N/A	N/A
		1024	03.08.03-111	12/27/2013	Y	N	N		-	DCD_03.08.03_111	0	
		1024	03.08.03-112	10/16/2013	Y	N	N		-	DCD_03.08.03_112	0	
		1024	03.08.03-113	7/8/2013	Y	N	N		-	DCD_03.08.03_114	-	4
		1024	03.08.03-114	7/8/2013	N	N	N		-	-	N/A	N/A
		1051	03.08.03-115	1/10/2014	Y	N	N		-	DCD_03.08.03_115	0	
3.8.4	Other Seismic Category I Structures	342	3.8.4-1	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-1	2013/1/31	N	N	N		-	-	N/A	N/A
		342	3.8.4-2	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-3	2009/7/3	Y	N	N		-	DCD_3.8.4-3	4	2
		342	3.8.4-4	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-5	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-6	2009/7/3	Y	N	N		-	DCD_3.8.4-6	4	2
		342	3.8.4-7	2009/7/3	Y	N	N		-	DCD_3.8.4-7	4	2
		342	3.8.4-8	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-8	2013/1/31	N	N	N		-	-	N/A	N/A
		342	3.8.4-9	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-10	2009/7/3	Y	N	N		-	DCD_3.8.4-10	4	2
		342	3.8.4-11	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-12	2009/7/3	N	N	N		-	-	N/A	N/A
		341	03.08.04-12	8/2/2013	N	N	N		-	-	N/A	N/A
		342	3.8.4-13	2009/7/3	Y	N	N		-	DCD_3.8.4-13	4	2
		342	03.08.04-13	7/8/2013	N	N			-	-	N/A	N/A
		342	3.8.4-14	2009/7/3	Y	N	N		-	DCD_3.8.4-14	4	2

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		342	03.08.04-14	7/8/2013	N	N			-	-	N/A	N/A
		342	3.8.4-15	2009/7/3	N	N	N		-	-	N/A	N/A
		342	03.08.04-15	7/8/2013	N	N	N		-	-	N/A	N/A
		342	3.8.4-16	2009/7/3	Y	N	N		-	DCD_3.8.4-16	4	2
		342	3.8.4-17	2009/7/3	Y	N	N		-	DCD_3.8.4-17	4	2
		342	3.8.4-18	2009/7/3	Y	N	N		-	DCD_3.8.4-18	4	2
		342	3.8.4-19	2009/7/3	Y	N	N		-	DCD_3.8.4-19	4	2
		342	3.8.4-20	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-20	2013/3/29	N	N	N		-	-	N/A	N/A
		342	3.8.4-21	2009/7/3	Y	Y	N		-	DCD_3.8.4-21	4	2
		342	3.8.4-22	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-23	2009/7/3	Y	N	N		-	DCD_3.8.4-23	4	2
		342	3.8.4-24	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-25	2009/7/3	Y	N	N		-	DCD_3.8.4-25	4	2
		342	3.8.4-26	2009/7/3	N	N	N		-	-	N/A	N/A
		342	3.8.4-27	2009/7/3	Y	N	N		-	DCD_3.8.4-27	4	2
		342	3.8.4-28	2009/7/3	Y	N	N		-	DCD_3.8.4-28	4	2
		342	3.8.4-29	2009/7/3	Y	N	N		-	DCD_3.8.4-29	4	2
		342	3.8.4-30	2009/7/3	Y	N	N		-	DCD_3.8.4-30	4	2
		342	3.8.4-31	2009/7/3	Y	N	N		-	DCD_3.8.4-31	4	2
		497	03.08.04-32	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-33	2010/2/19	Y	N	N		-	DCD_03.08.04-33	TBD	
		497	03.08.04-33	2013/3/29	N	N	N		-	-	N/A	N/A
		497	03.08.04-34	2010/2/19	Y	N	N		-	DCD_03.08.04-34	2	3
		497	03.08.04-35	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-36	2010/2/19	Y	N	N		-	DCD_03.08.04-36	2	3
		497	03.08.04-37	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-37	2011/1/27	N	N	N		-	-	N/A	N/A
		497	03.08.04-38	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-39	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-39	7/8/2013	N	N	N		-	-	N/A	N/A
		497	03.08.04-40	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-40	7/8/2013	N	N	N		-	-	N/A	N/A
		497	03.08.04-41	2010/2/19	Y	N	N		-	DCD_03.08.04-41	2	3
		497	03.08.04-42	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-42	2013/3/29	N	N	N		-	-	N/A	N/A
		497	03.08.04-43	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-44	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-44	2011/1/27	N	N	N		-	-	N/A	N/A
		497	03.08.04-45	2010/2/19	N	N	N		-	-	N/A	N/A
		497	03.08.04-46	2010/2/19	Y	N	N		-	DCD_03.08.04-46	2	3
		497	03.08.04-47	2010/2/19	N	N	N		-	-	N/A	N/A
		-	-	-	-	-	-	-	COL3.8(22) revised	MAP-03-012	-	2
		658	03.08.04-48	2010/12/28	N	N	N		-	-	N/A	N/A
		658	03.08.04-48	7/8/2013	N	N	N		-	-	N/A	N/A
		658	03.08.04-49	2010/12/28	N	N	N		-	-	N/A	N/A
		767	03.08.04-50	2011/11/16	N	N	N		-	-	N/A	N/A
		767	03.08.04-50	2013/3/26	N	N	N		-	-	N/A	N/A
		767	03.08.04-51	2011/8/1	N	N	N		-	-	N/A	N/A
		767	03.08.04-51	2011/11/16	N	N	N		-	-	N/A	N/A
		767	03.08.04-51	2013/3/26	N	N	N		-	-	N/A	N/A
		879	03.08.04-52	02/28/2012	N	N	N		-	-	N/A	N/A
		879	03.08.04-52	03/26/2012	N	N	N		-	-	N/A	N/A
		879	03.08.04-52	2013/3/29	N	N	N		-	-	N/A	N/A
		1044	03.08.04-53	8/2/2013	Y	N	N		-	DCD_03.08.04-53	0	
		1044	03.08.04-54	8/2/2013	Y	N	N		-	DCD_03.08.04-54	0	
		1044	03.08.04-55	8/2/2013	N	N	N		-	-	N/A	N/A
		1044	03.08.04-55	1/10/2014	N	N	N		-	-	N/A	N/A
		1045	03.08.04-56	1/10/2014	N	N	N		-	-	N/A	N/A
		1044	03.08.04-57	8/2/2013	Y	N	N		-	DCD_03.08.04-57	0	
		1044	03.08.04-58	8/2/2013	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
3.8.5	Foundations	340	03.08.05-01	2009/7/3	Y	N	N		-	DCD_03.08.05-01	4	2
		340	03.08.05-02	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-03	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-04	2009/7/3	Y	N	N		-	DCD_03.08.05-04	4	2
		340	03.08.05-05	2009/7/3	Y	N	N		-	DCD_03.08.05-05	4	2
		340	03.08.05-06	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-07	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-08	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-09	2009/7/3	Y	N	N		-	DCD_03.08.05-09	4	2
		340	03.08.05-09	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-10	2009/7/3	Y	N	N		-	DCD_03.08.05-10	4	2
		340	03.08.05-11	2009/7/3	Y	N	N		-	DCD_03.08.05-11	4	2
		340	03.08.05-12	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-12	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-13	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-13	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-13	1/10/2014	N	N	N		-	-	N/A	N/A
		340	03.08.05-14	2009/7/3	Y	N	N		-	DCD_03.08.05-14	4	2
		340	03.08.05-14	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-14	1/10/2014	N	N	N		-	-	N/A	N/A
		340	03.08.05-15	2009/7/3	Y	N	N		-	DCD_03.08.05-15	4	2
		340	03.08.05-16	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-17	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-17	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-18	2009/7/3	Y	N	N		-	DCD_03.08.05-18	4	2
		340	03.08.05-18	2013/3/29	N	N	N		-	-	N/A	N/A
		340	03.08.05-19	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-20	2009/7/3	Y	N	N		-	DCD_03.08.05-20	4	2
		340	03.08.05-21	2009/7/3	N	N	N		-	-	N/A	N/A
		340	03.08.05-22	2009/7/3	Y	N	N		-	DCD_03.08.05-22	4	2
		496	03.08.05-23	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-24	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-25	2010/2/4	Y	N	N		-	DCD_03.08.05-25	6	3
		496	03.08.05-26	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-26	2013/3/29	N	N	N		-	-	N/A	N/A
		496	03.08.05-27	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-27	2013/1/31	N	N	N		-	-	N/A	N/A
		496	03.08.05-28	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-29	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-30	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-31	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-31	2013/3/29	N	N	N		-	-	N/A	N/A
		496	03.08.05-32	2010/2/4	Y	N	N		-	DCD_03.08.05-32	2	3
		496	03.08.05-32	2013/3/29	N	N	N		-	-	N/A	N/A
		496	03.08.05-33	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-33	2013/3/29	N	N	N		-	-	N/A	N/A
		496	03.08.05-34	2010/2/4	N	N	N		-	-	N/A	N/A
		496	03.08.05-35	2010/2/4	Y	Y	N		-	DCD_03.08.05-35	6	3
		657	03.08.05-36	2010/12/28	N	N	N		-	-	N/A	N/A
		657	03.08.05-36	2013/1/31	N	N	N		-	-	N/A	N/A
		657	03.08.05-37	2010/12/28	N	N	N		-	-	N/A	N/A
		657	03.08.05-38	2010/12/28	Y	N	N		-	DCD_03.08.05-38	7	3
		657	03.08.05-38	2013/1/31	N	N	N		-	-	N/A	N/A
		657	03.08.05-39	2010/12/28	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		657	03.08.05-39	2013/3/29	N	N	N		-	-	N/A	N/A
		657	03.08.05-40	2010/12/28	N	N	N		-	-	N/A	N/A
		657	03.08.05-40	2013/3/29	N	N	N		-	-	N/A	N/A
		657	03.08.05-41	2010/12/28	Y	Y	N		-	DCD_03.08.05-41	7	3
		657	03.08.05-41	2013/3/29	N	N	N		-	-	N/A	N/A
		855	03.08.05-42	2013/3/29	N	N	N		-	-	N/A	N/A
		855	03.08.05-43	2013/3/29	N	N	N		-	-	N/A	N/A
		855	03.08.05-44	2013/3/29	N	N	N		-	-	N/A	N/A
		855	03.08.05-45	2013/3/29	N	N	N		-	-	N/A	N/A
		1045	03.08.05-46	8/26/2013	Y	N	N		-	DCD_03.08.05-46	0	
		1045	03.08.05-47	8/2/2013	Y	N	N		-	DCD_03.08.05-47	0	
		1045	03.08.05-48	8/26/2013	Y	N	N		-	DCD_03.08.05-48	0	
		1045	03.08.05-49	8/2/2013	Y	N	N		-	DCD_03.08.05-49	0	
		1045	03.08.05-50	8/2/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-51	1/10/2014	Y	N	N		-	DCD_03.08.05-51	0	
		1045	03.08.05-52	8/2/2013	Y	N	N		-	DCD_03.08.05-52	0	
		1045	03.08.05-53	8/26/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-54	10/16/2013	Y	N	N		-	DCD_03.08.05-54	0	
		1045	03.08.05-54	12/27/2013	Y	N	N		-	DCD_03.08.05-54	0	
		1045	03.08.05-55	10/16/2013	Y	N	N		-	DCD_03.08.05-55	0	
		1045	03.08.05-56	10/16/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-57	9/6/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-58	8/2/2013	Y	N	N		-	DCD_03.08.05-58	0	
		1045	03.08.05-60	9/6/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-61	8/26/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-62	8/2/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-63	8/2/2013	Y	N	N		-	DCD_03.08.05-63	0	
		1045	03.08.05-64	9/6/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-65	8/2/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-66	8/2/2013	N	N	N		-	-	N/A	N/A
		1045	03.08.05-67	8/2/2013	Y	N	N		-	DCD_03.08.05-67	0	
3.9.1	Special Topics for	296	03.09.01-1	2009/5/14	Y	N	N		-	DCD_03.09.01-1	3	2
	Mechanical Components	296	03.09.01-2	2009/5/14	N	N	N		-	-	N/A	N/A
		296	03.09.01-3	2009/5/14	N	N	N		-	-	N/A	N/A
		296	03.09.01-4	2009/5/14	Y	N	N		-	DCD_03.09.01-4	3	2
		296	03.09.01-4	2011/12/13	N	N	N		-	-	N/A	N/A
		296	03.09.01-5	2009/5/14	Y	N	N		-	DCD_03.09.01-5	3	2
		296	03.09.01-5	2011/12/13	N	N	N		-	-	N/A	N/A
		770	03.09.01-6	2011/7/26	Y	N	N		-	-	N/A	N/A
		770	03.09.01-6	2011/12/2	Y	N	N		-	DCD_03.09.01-6	1	4
		802	03.09.01-7	11/01/2011	Y	N	N		-	DCD_03.09.01-7	1	4
3.9.2	Dynamic Testing and Analysis	204	3.9.2-01	2009/3/25	Y	N	N		-	DCD_3.9.2-01	2	2
	of Systems, Structures,	204	3.9.2-02	2009/3/25	Y	N	N		-	DCD_3.9.2-02	2	2
	and Components	204	3.9.2-03	2009/3/25	Y	N	N		-	DCD_3.9.2-03	2	2
		204	3.9.2-04	2009/3/25	Y	N	N		-	DCD_3.9.2-04	2	2
		204	3.9.2-04	12/13/2011	N	N	N		-	-	N/A	N/A
		204	3.9.2-05	2009/3/25	Y	N	N		-	DCD_3.9.2-05	2	2
		204	3.9.2-05	12/13/2011	N	N	N		-	-	N/A	N/A
		204	3.9.2-06	2009/3/25	N	N	N		-	-	N/A	N/A
		204	3.9.2-07	2009/3/25	Y	N	N		-	DCD_3.9.2-07	2	2
		204	3.9.2-08	2009/3/25	Y	N	N		-	DCD_3.9.2-08	2	2
		204	3.9.2-09	2009/3/25	Y	N	N		-	DCD_3.9.2-09	2	2
		205	3.9.2-10	2009/4/30	N	N	N		-	-	N/A	N/A
		205	3.9.2-11	2009/4/30	Y	N	N		-	DCD_3.9.2-11	3	2
		205	3.9.2-12	2009/4/30	N	N	N		-	-	N/A	N/A
		205	3.9.2-13	2009/4/30	N	N	N		-	-	N/A	N/A
		205	3.9.2-14	2009/4/30	Y	N	N		-	DCD_3.9.2-14	-	2
		205	3.9.2-15	2009/4/30	N	N	N		-	-	N/A	N/A
		205	3.9.2-16	2009/4/30	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		205	3.9.2-17	2009/4/30	N	N	N		-	-	N/A	N/A
		205	3.9.2-18	2009/4/30	Y	N	N		-	DCD_3.9.2-18	3	2
		272	3.9.2-19	2009/4/9	Y	N	N		-	DCD_3.9.2-19	-	2
		272	3.9.2-20	2009/4/9	N	N	N		-	-	N/A	N/A
		272	3.9.2-21	2009/4/9	Y	N	N		-	DCD_3.9.2-21	3	2
		272	3.9.2-22	2009/4/9	Y	N	N		-	DCD_3.9.2-22	3	2
		272	3.9.2-23/ RAI 3.9.2-50	2009/4/9	Y	N	N		-	DCD_3.9.2-23	3	2
		272	3.9.2-24/ RAI 3.9.2-51	2009/4/9	Y	N	N		-	DCD_3.9.2-24	3	2
		272	3.9.2-25/ RAI 3.9.2-52	2009/4/9	Y	N	N		-	DCD_3.9.2-25	3	2
		272	3.9.2-26/ RAI 3.9.2-53	2009/4/9	N	N	N		-	-	N/A	N/A
		272	3.9.2-27/ RAI 3.9.2-54	2009/4/9	Y	N	N		-	DCD_3.9.2-27	3	2
		272	3.9.2-28/ RAI 3.9.2-55	2009/4/9	Y	N	N		-	DCD_3.9.2-28	3	2
		272	3.9.2-29/ RAI 3.9.2-56	2009/4/9	Y	N	N		-	DCD_3.9.2-29	3	2
		272	3.9.2-30/ RAI 3.9.2-57	2009/4/9	N	N	N		-			
		272	3.9.2-30/ RAI 3.9.2-57	2009/7/29	N	N	N		-	-	N/A	N/A
		272	3.9.2-31/ RAI 3.9.2-59	2009/4/9	N	N	N		-	-	N/A	N/A
		272	3.9.2-32/ RAI 3.9.2-58	2009/4/9	N	N	N		-	-	N/A	N/A
		272	3.9.2-33	2009/5/13	N	N	N		-	-	N/A	N/A
		272	3.9.2-34	2009/4/9	N	N	N		-	-	N/A	N/A
		272	3.9.2-35	2009/4/9	N	N	N		-	-	N/A	N/A
		214	3.9.2-34	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-35	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-36	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-37	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-38	2009/4/30	Y	N	N		-	DCD_3.9.2-38	3	2
		214	3.9.2-39	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-40	2009/4/30	N	N	N		-	-	N/A	N/A
		214	3.9.2-41	2009/4/30	N	N	N		-	-	N/A	N/A
		206	3.9.2-40	2009/3/27	Y	N	N		-	DCD_3.9.2-40	-	2
		206	3.9.2-41	2009/3/27	N	N	N		-	-	N/A	N/A
		206	3.9.2-42	2009/3/27	Y	N	N		-	DCD_3.9.2-42	2	2
		206	3.9.2-43	2009/3/27	Y	N	N		-	DCD_3.9.2-43	2	2
		207	3.9.2-50	2009/3/27	Y	N	N		-	DCD_3.9.2-50	2	2
		207	3.9.2-51	2009/3/27	Y	N	N		-	DCD_3.9.2-51	2	2
		207	3.9.2-52	2009/3/27	Y	N	N		-	DCD_3.9.2-52	2	2
		207	3.9.2-53	2009/3/27	Y	N	N		-	DCD_3.9.2-53	2	2
		207	3.9.2-54	2009/3/27	N	N	N		-	-	N/A	N/A
		207	3.9.2-55	2009/3/27	Y	N	N		-	DCD_3.9.2-55	2	2
		207	3.9.2-56	2009/3/27	Y	N	N		-	DCD_3.9.2-56	2	2
		207	3.9.2-57	2009/3/27	Y	N	N		-	DCD_3.9.2-57	2	2
		207	3.9.2-58	2009/3/27	Y	N	N		-	DCD_3.9.2-58	2	2
		207	3.9.2-59	2009/3/27	N	N	N		-	-	N/A	N/A
		208	3.9.2-70	2009/3/27	Y	N	N		-	DCD_3.9.2-70	3	2
3.9.2	Dynamic Testing and Analysis	498	03.09.02-59	2010/1/15	N	N	N		-	-	N/A	N/A
	of Systems, Structures,	498	03.09.02-60	2010/1/15	N	N	N		-	-	N/A	N/A
	and Components	498	03.09.02-61	2010/2/3	Y	N	N		-	DCD_03.09.02-61	TBD	
		498	03.09.02-62	2010/2/3	Y	N	N		-	DCD_03.09.02-62	TBD	
		498	03.09.02-63	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-64	2010/2/3	Y	N	N		-	DCD_03.09.02-64	2	3
		498	03.09.02-65	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-66	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-67	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-68	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-69	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-70	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-71	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-72	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-73	2010/1/15	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		498	03.09.02-74	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-75	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-76	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-77	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-78	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-79	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-80	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-81	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-82	2010/2/3	N	N	N		-	-	N/A	N/A
		498	03.09.02-83	2010/1/15	N	N	N		-	-	N/A	N/A
		498	03.09.02-84	2010/2/3	N	N	N		-	-	N/A	N/A
		614	03.09.02-85	2010/9/16	N	N	N		-	-	N/A	N/A
		614	03.09.02-86	2010/9/16	N	N	N		-	-	N/A	N/A
		614	03.09.02-87	2010/9/16	N	N	N		-	-	N/A	N/A
		614	03.09.02-88	2010/9/29	N	N	N		-	-	N/A	N/A
		614	03.09.02-89	2010/9/29	Y	N	N		-	DCD_03.09.02-89	6	3
		614	03.09.02-90	2010/9/29	Y	N	N		-	DCD_03.09.02-90	6	3
		614	03.09.02-91	2010/10/28	N	N	N		-	-	N/A	N/A
		614	03.09.02-91	2011/12/2	N	N	N		-	-	N/A	N/A
		646	03.09.02-92	2010/11/11	N	N	N		-	-	N/A	N/A
		646	03.09.02-92	2010/12/14	N	N	N		-	-	N/A	N/A
		646	03.09.02-92	2011/10/14	N	N	N		-	-	N/A	N/A
		916	03.09.02-93	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-94	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-94	9/4/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-95	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-95	9/4/2012	N	N	N					
		916	03.09.02-96	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-97	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-97	9/4/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-98	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-98	9/4/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-99	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-100	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-101	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-101	9/4/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-102	4/26/2012	N	N	N		-	-	N/A	N/A
		916	03.09.02-102	9/4/2012	N	N	N		-	-	N/A	N/A
3.9.3	ASME Code Class 1, 2, and 3	209	03.09.03-1	2009/4/30	N	N	N		-	-	N/A	N/A
	Components,	209	03.09.03-2	2009/4/30	Y	N	N		-	DCD_03.09.03-2	3	2
	and Component Supports,	209	03.09.03-3	2009/4/30	Y	N	N		-	DCD_03.09.03-3	3	2
	and Core Support Structures	209	03.09.03-4	2009/4/30	Y	N	N		-	DCD_03.09.03-4	3	2
		209	03.09.03-5	2009/4/30	Y	N	N		-	DCD_03.09.03-5	3	2
		209	03.09.03-6	2009/4/30	Y	N	N		-	DCD_03.09.03-6	3	2
		209	03.09.03-7	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-8	2009/4/30	Y	N	N		-	DCD_03.09.03-8	3	2
		209	03.09.03-9	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-10	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-11	2009/4/30	Y	N	N		-	DCD_03.09.03-11	3	2
		209	03.09.03-12	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-13	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-14	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-15	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-16	2009/4/30	Y	N	N		-	DCD_03.09.03-16	3	2
		209	03.09.03-17	2009/4/30	Y	N	N		-	DCD_03.09.03-17	3	2
		209	03.09.03-18	2009/4/30	Y	N	N		-	DCD_03.09.03-18	3	2
		209	03.09.03-19	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-20	2009/4/30	Y	N	N		-	DCD_03.09.03-20	3	2
		209	03.09.03-21	2009/4/30	N	N	N		-	-	N/A	N/A
		209	03.09.03-22	2009/4/30	Y	N	N		-	DCD_03.09.03-22	3	2

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		209	03.09.03-23	2009/4/30	Y	N	N		-	DCD_03.09.03-23	3	2
		375	03.09.03-24	2009/7/17	N	N	N		-	-	N/A	N/A
		375	03.09.03-25	2009/7/17	N	N	N		-	-	N/A	N/A
		822	03.09.03-26	01/26/2012	N	N	N		-	-	N/A	N/A
		847	03.09.03-27	11/25/2011	Y	N	N		-	DCD_03.09.03-27	1	4
		847	03.09.03-27	01/24/2012	Y	N	N		-	DCD_03.09.03-27 S1	2	4
		851	03.09.03-28	12/20/2011	Y	N	N		-	DCD_03.09.03-28	2	4
		870	03.09.03-29	12/26/2011	Y	N	N		-	DCD_03.09.03-29	2	4
		943	03.09.03-30	7/13/2012	Y	N	N		-	DCD_03.09.03-30	3	4
3.9.4	Control Rod Drive Systems	107	1293-01	2008/12/19	Y	N	N	fin.	-	DCD_1293-01	0	2
		107	1293-1	3/12/2013	N	N	N		-	-	N/A	N/A
		107	1293-01	11/8/2013	N	N	N		-	-	N/A	N/A
		107	1293-02	2008/12/19	Y	N	N	fin.	-	DCD_1293-02	0	2
		107	1293-03	2008/12/19	Y	N	N	fin.	-	DCD_1293-03	0	2
		107	1293-04	2008/12/19	N	N	N	fin.	-	N/A	N/A	N/A
		107	1293-05	2008/12/19	N	N	N	fin.	-	N/A	N/A	N/A
		107	1293-06	2008/12/19	N	N	N	fin.	-	N/A	N/A	N/A
		107	1293-06	2011/8/11	N	N	N		-	N/A	N/A	N/A
		107	1293-06	3/12/2013	N	N	N		-	N/A	N/A	N/A
		107	1293-06	11/8/2013	N	N	N		-	-	N/A	N/A
		107	1293-07	2008/12/19	N	N	N	fin.	-	N/A	N/A	N/A
		107	1293-07	11/8/2013	N	N	N		-	-	N/A	N/A
		107	1293-08	2008/12/19	Y	N	N	fin.	-	DCD_1293-08	0	2
		107	1293-09	2008/12/19	N	N	N	fin.	-	N/A	N/A	N/A
		107	1293-10	2008/12/19	Y	N	N	fin.	-	DCD_1293-10	0	2
		569	03.09.04-2	2010/5/13	Y	N	N		-	DCD_03.09.04-2	3	3
		570	03.09.04-3	2010/5/19	Y	N	N		-	DCD_03.09.04-3	4	3
		570	03.09.04-4	2010/5/19	Y	N	N		-	DCD_03.09.04-4	4	3
		570	03.09.04-5	2010/5/19	Y	N	N		-	DCD_03.09.04-5	4	3
		570	03.09.04-6	2010/5/19	N	N	N		-	-	N/A	N/A
		604	03.09.04-7	2010/7/28	Y	N	N		-	DCD_03.09.04-7	4	3
		604	03.09.04-8	2010/7/28	Y	N	N		-	DCD_03.09.04-8	4	3
		604	03.09.04-9	2010/7/28	Y	N	N		-	DCD_03.09.04-9	4	3
		604	03.09.04-9	2011/8/11	N	N	N		-	-	N/A	N/A
		679	03.09.04-10	2010/2/9	Y	N	N		-	DCD_03.09.04-10	0	4
		679	03.09.04-10	2011/4/25	Y	N	N					4
		679	03.09.04-11	2010/2/9	Y	N	N		-	DCD_03.09.04-11	0	4
		679	03.09.04-11	2011/4/25	Y	N	N		-	DCD_03.09.04-11	0	4
		679	03.09.04-11	2011/7/29	Y	N	N		-	DCD_03.09.04-11	1	4
		679	03.09.04-12	2010/2/9	N	N	N		-	-	N/A	N/A
		835	03.09.04-13	11/02/2011	Y	N	N		-	DCD_03.09.04-13	1	4
		848	03.09.04-14	11/18/2011	N	N	N		-	-	N/A	N/A
		848	03.09.04-14	11/8/2013	N	N	N		-	-	N/A	N/A
3.9.5	Reactor Pressure Vessel Internals	374	03.09.05-1	2009/6/19	Y	N	N		-	DCD_03.09.05-1	3	2
		374	03.09.05-2	2009/7/17	Y	N	N		-	DCD_03.09.05-2	4	2
		374	03.09.05-3	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-4	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-5	2009/6/19	Y	N	N		-	DCD_03.09.05-5	3	2
		374	03.09.05-6	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-7	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-8	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-9	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-10	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-10	9/5/2012	Y	N	N		-	DCD_03.09.05-10	3	4
		374	03.09.05-11	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-11	2013/2/28	N	N	N		-	-	N/A	N/A
		374	03.09.05-12	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-13	2009/6/19	Y	N	N		-	DCD_03.09.05-13	3	2
		374	03.09.05-14	2009/7/17	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		374	03.09.05-15	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-16	2009/7/17	Y	N	N		-	DCD_03.09.05-16	4	2
		374	03.09.05-17	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-18	3/30/2012	N	N	N		-	-	N/A	N/A
		374	03.09.05-19	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-20	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-21	2009/6/19	N	N	N		-	-	N/A	N/A
		374	03.09.05-22	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-22	11/06/2012	Y	N	N		-	DCD_03.09.05-22	3	4
		374	03.09.05-23	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-24	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-25	2009/6/19	N	N	N		-	-	N/A	N/A
		374	03.09.05-26	2009/7/17	N	N	N		-	-	N/A	N/A
		374	03.09.05-27	2009/7/17	Y	N	N		-	DCD_03.09.05-27	4	2
		663	03.09.05-28	2011/1/21	N	N	N		-	-	N/A	N/A
		663	03.09.05-29	2011/1/21	N	N	N		-	-	N/A	N/A
		663	03.09.05-30	2011/1/21	Y	N	N		-	DCD_03.09.05-30	0	4
		663	03.09.05-31	2011/1/21	N	N	N		-	-	N/A	N/A
		663	03.09.05-32	2011/1/21	Y	N	N		-	DCD_03.09.05-32	0	4
		663	03.09.05-32	10/05/2012	Y	N	N		-	DCD_03.09.05-32	-	4
		663	03.09.05-33	2011/1/21	Y	N	N		-	DCD_03.09.05-33	0	4
		663	03.09.05-34	2011/1/21	N	N	N		-	-	N/A	N/A
		663	03.09.05-34	10/05/2012	Y	N	N		-	DCD_03.09.05-34	3	4
		663	03.09.05-34	7/19/2013	Y	N	N		-	DCD_03.09.05-34 S01	0	
		971	03.09.05-35	12/05/2012	N	N	N		-	-	N/A	N/A
		971	03.09.05-35	3/29/2013	N	N	N		-	-	N/A	N/A
3.9.6	Functional Design, Qualification,	288	03.09.06-01	2009/5/23	Y	N	N		-	DCD_03.09.06-01	3	2
	and Inservice Testing Programs	288	03.09.06-02	2009/5/23	Y	N	N		-	DCD_03.09.06-02	3	2
	for Pumps, Valves,	288	03.09.06-03	2009/5/23	Y	N	N		-	DCD_03.09.06-03	3	2
	and Dynamic Restraints	288	03.09.06-04	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-05	2009/5/23	Y	N	N		-	DCD_03.09.06-05	3	2
		288	03.09.06-06	2009/5/23	Y	N	N		-	DCD_03.09.06-06	3	2
		288	03.09.06-07	2009/5/23	Y	N	N		-	DCD_03.09.06-07	3	2
		288	03.09.06-08	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-09	2009/5/23	Y	N	N		-	DCD_03.09.06-09	3	2
		288	03.09.06-10	2009/5/23	Y	N	N		-	DCD_03.09.06-10	3	2
		288	03.09.06-11	2009/5/23	Y	N	N		-	DCD_03.09.06-11	3	2
		288	03.09.06-12	2009/5/23	Y	N	N		-	DCD_03.09.06-12	3	2
		288	03.09.06-13	2009/5/23	Y	N	N		-	DCD_03.09.06-13	3	2
		288	03.09.06-14	2009/5/23	Y	N	N		-	DCD_03.09.06-14	3	2
		288	03.09.06-15	2009/5/23	Y	N	N		-	DCD_03.09.06-15	3	2
		288	03.09.06-16	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-17	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-18	2009/5/23	Y	N	N		-	DCD_03.09.06-18	3	2
		288	03.09.06-19	2009/5/23	Y	N	N		-	DCD_03.09.06-19	3	2
		288	03.09.06-20	2009/5/23	Y	N	N		-	DCD_03.09.06-20	3	2
		288	03.09.06-21	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-22	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-23	2009/5/23	Y	N	N		-	DCD_03.09.06-23	3	2
		288	03.09.06-24	2009/5/23	N	N	N		-	-	N/A	N/A
		3	03.09.06-25	2009/5/23	Y	N	N		-	DCD_03.09.06-25	3	2
		288	03.09.06-26	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-27	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-28	2009/5/23	Y	N	N		-	DCD_03.09.06-28	3	2
		288	03.09.06-29	2009/5/23	Y	N	N		-	DCD_03.09.06-29	3	2
		288	03.09.06-30	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-31	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-32	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-33	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-34	2009/5/23	Y	N	N		-	DCD_03.09.06-34	3	2

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		288	03.09.06-35	2009/5/23	Y	N	N		-	DCD_03.09.06-35	3	2
		288	03.09.06-36	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-37	2009/5/23	Y	N	N		-	DCD_03.09.06-37	3	2
		288	03.09.06-38	2009/5/23	Y	N	N		-	DCD_03.09.06-38	3	2
		288	03.09.06-39	2009/5/23	Y	N	N		-	DCD_03.09.06-39	3	2
		288	03.09.06-40	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-41	2009/5/23	Y	N	N		-	DCD_03.09.06-41	3	2
		288	03.09.06-42	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-43	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-44	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-45	2009/5/23	N	N	N		-	-	N/A	N/A
		288	03.09.06-46	2009/5/23	Y	N	N		-	DCD_03.09.06-46	3	2
		288	03.09.06-47	2009/5/23	Y	N	N		-	DCD_03.09.06-47	3	2
		288	03.09.06-48	2009/5/23	N	N	N		-	-	N/A	N/A
		801	03.09.06-49	11/02/2011	Y	N	N		-	DCD_03.09.06-49	1	4
		801	03.09.06-50	11/02/2011	Y	N	N		-	DCD_03.09.06-50	1	4
		801	03.09.06-51	11/02/2011	Y	N	N		-	DCD_03.09.06-51	1	4
		801	03.09.06-52	11/02/2011	Y	N	N		-	DCD_03.09.06-52	1	4
		801	03.09.06-53	11/02/2011	Y	Y	N		-	DCD_03.09.06-53	1	4
		801	03.09.06-53	03/08/2012	Y	Y	Y		-	DCD_03.09.06-53	2	4
		801	03.09.06-54	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-55	11/02/2011	Y	Y	N		-	DCD_03.09.06-55	1	4
		801	03.09.06-55	03/08/2012	Y	Y	Y		-	DCD_03.09.06-55	2	4
		801	03.09.06-56	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-57	11/02/2011	Y	N	N		-	DCD_03.09.06-57	1	4
		801	03.09.06-57	03/08/2012	Y	N	N		-	DCD_03.09.06-57	2	4
		801	03.09.06-58	11/02/2011	Y	N	N		-	DCD_03.09.06-58	1	4
		801	03.09.06-58	03/08/2012	Y	N	N		-	DCD_03.09.06-58	2	4
		801	03.09.06-59	11/02/2011	Y	N	N		-	DCD_03.09.06-59	1	4
		801	03.09.06-59	03/08/2012	Y	N	N		-	DCD_03.09.06-59	2	4
		801	03.09.06-60	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-60	03/08/2012	N	N	N		-	-	N/A	N/A
		801	03.09.06-61	11/02/2011	Y	N	N		-	DCD_03.09.06-59	1	4
		801	03.09.06-62	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-62	03/08/2012	N	N	N		-	-	N/A	N/A
		801	03.09.06-63	11/02/2011	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		801	03.09.06-63	03/08/2012	N	N	N		-	-	N/A	N/A
		801	03.09.06-64	11/02/2011	Y	N	N		-	DCD_03.09.06-64	1	4
		801	03.09.06-65	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-66	11/02/2011	Y	Y	N		-	DCD_03.09.06-66	1	4
		801	03.09.06-66	03/08/2012	Y	Y	Y		-	DCD_03.09.06-66	2	4
		801	03.09.06-67	11/02/2011	N	N	N		-	-	N/A	N/A
		801	03.09.06-68	11/02/2011	Y	Y	N		-	DCD_03.09.06-68	1	4
		801	03.09.06-68	03/08/2012	Y	Y	Y		-	DCD_03.09.06-68	2	4
		896	03.09.06-69	4/3/2012	Y	N	N		-	DCD_03.09.06-69	3	4
		896	03.09.06-69	12/28/2012	Y	N	N		-	DCD_03.09.06-69	4	4
3.10	Seismic/Dynamic Qual	216	USAPWR-3.10-1	2009/3/25	N	N	N		-	-	N/A	N/A
	of Mech/Elec Eqmt	216	USAPWR-3.10-2	2009/3/25	Y	N	N		-	DCD_USAPWR-3.10-2	2	2
		216	USAPWR-3.10-3	2009/4/22	Y	N	N		-	DCD_USAPWR-3.10-3	3	2
		216	USAPWR-3.10-4	2009/3/25	N	N	N		-	-	N/A	N/A
		216	USAPWR-3.10-5	2009/4/22	N	N	N		-	-	N/A	N/A
		216	USAPWR-3.10-6	2009/3/25	Y	N	N		-	DCD_USAPWR-3.10-6	2	2
		216	USAPWR-3.10-7	2009/4/22	N	N	N		-	-	N/A	N/A
		216	USAPWR-3.10-8	2009/3/25	Y	N	N		-	DCD_USAPWR-3.10-8	2	2
		216	USAPWR-3.10-9	2009/4/22	N	N	N		-	-	N/A	N/A
		486	03.10-10	2009/12/9	N	N	N		-	-	N/A	N/A
		486	03.10-11	2009/12/9	Y	N	N		-	DCD_03.10-11	1	3
		486	03.10-12	2009/12/9	Y	N	N		-	DCD_03.10-12	1	3
		486	03.10-13	2009/12/25	Y	N	N		-	DCD_03.10-13	1	3
		486	03.10-14	2009/12/25	N	N	N		-	-	N/A	N/A
		486	03.10-15	2009/12/25	N	N	N		-	-	N/A	N/A
		486	03.10-16	2009/12/25	N	N	N		-	-	N/A	N/A
		486	03.10-17	2009/12/25	N	N	N		-	-	N/A	N/A
		486	03.10-17	6/25/2013	Y	N	N		-	-	5	4
		951	03.10-18	10/15/2012	N	N	N		-	-	N/A	N/A
		1019	03.10-19	6/18/2013	N	N	N		-	-	N/A	N/A
		1019	03.10-20	6/18/2013	N	N	N		-	-	N/A	N/A
3.11	Environmental Qual	358	03.11-1	2009/7/10	Y	N	N		-	DCD_03.11-1	4	2
	of Mech/Elec Eqmt	358	03.11-2	2009/7/10	Y	N	N		-	DCD_03.11-2	4	2
		358	03.11-3	2009/7/10	N	N	N		-	-	N/A	N/A
		358	03.11-4	2009/7/10	N	N	N		-	-	N/A	N/A
		358	03.11-5	2009/7/10	Y	N	N		-	DCD_03.11-5	4	2
		444	03.11-6	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-7	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-8	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-9	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-10	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-11	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-12	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-13	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-14	2009/9/29	N	N	N		-	-	N/A	N/A
		444	03.11-15	2009/9/29	N	N	N		-	-	N/A	N/A
		445	03.11-16	2009/9/29	Y	Y 1.8	N		-	DCD_03.11-16	0	3

Chapter:3

SRP Section		DCD RAI Response								Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status					
		511	03.11-17	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-17 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-18	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-18 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-19	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-19 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-20	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-20 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-21	2010/2/2	Y	N	N		-	DCD_03.11-21	2	3
		511	03.11-21 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-22	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-22 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-23	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-23 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-24	2010/2/2	Y	N	N		-	DCD_03.11-24	2	3
		511	03.11-25	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-25 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-26	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-26 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		511	03.11-27	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-28	2010/2/2	N	N	N		-	-	N/A	N/A
		511	03.11-28 Supp	2010/6/28	N	N	N		-	-	N/A	N/A
		512	03.11-29	2010/1/28	N	N	N		-	-	N/A	N/A
		512	03.11-30	2010/1/28	N	N	N		-	-	N/A	N/A
		512	03.11-31	2010/1/28	N	N	N		-	-	N/A	N/A
		512	03.11-32	2010/1/28	N	N	N		-	-	N/A	N/A
		512	03.11-33	2010/1/28	N	N	N		-	-	N/A	N/A
		512	03.11-34	2010/1/28	Y	N	N		-	DCD_03.11-34	4	3
		512	03.11-34	9/5/2012	Y	N	N		-	DCD_03.11-34	3	4
		512	03.11-35	2010/1/28	N	N	N		-	-	N/A	N/A
		589	03.11-36	2010/7/8	N	N	N		-	-	N/A	N/A
		589	03.11-36	2013/4/3	Y	N	N		-	DCD_03.11-36	TBD	
		589	03.11-37	2010/7/8	N	N	N		-	-	N/A	N/A
		589	03.11-38	2010/7/8	Y	N	N		-	DCD_03.11-38	4	3
		589	03.11-38	2013/4/12	Y	N	N		-	DCD_03.11-38	4	4
		650	03.11-39	12/6/2013	N	N	N		-	-	N/A	N/A
		650	03.11-40	XX/YY/2010	-	-	-	-	COL3.10(10) deleted	MAP-03-014	-	2
		805	03.11-41	9/10/2012	Y	N	N		-	DCD_03.11-41	3	4
		805	03.11-41	2/14/2013	Y	N	N		-	DCD_03.11-41	4	4
		880	03.11-42	3/23/2012	N	N	N		-	-	N/A	N/A
		880	03.11-42	2/15/2013	N	N	N		-	-	N/A	N/A
		880	03.11-42	12/6/2013	N	N	N		-	-	N/A	N/A
		880	03.11-43	9/10/2012	Y	N	N		-	-	N/A	N/A
		880	03.11-44	3/23/2012	N	N	N		-	-	N/A	N/A
		880	03.11-45	3/23/2012	N	N	N		-	-	N/A	N/A
		880	03.11-46	3/23/2012	N	N	N		-	-	N/A	N/A

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		880	03.11-47	3/23/2012	N	N	N		-	-	N/A	N/A
		901	03.11-48	4/10/2012	Y	N	N		-	DCD_03.11-48	3	
		901	03.11-49	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-50	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-51	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-52	4/16/2012	N	N	N		-	-	N/A	N/A
		901	03.11-53	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-54	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-55	4/10/2012	Y	N	N		-	DCD_03.11-55	3	4
		901	03.11-56	4/16/2012	Y	N	N		-	DCD_03.11-56	3	4
		901	03.11-57	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-58	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-59	4/10/2012	N	N	N		-	-	N/A	N/A
		901	03.11-60	4/16/2012	Y	N	N		-	DCD_03.11-60	3	4
		957	03.11-61	9/21/2012	N	N	N		-	-	N/A	N/A
		1031	03.11-62	8/2/2013	Y	N			-	DCD_03.11-62	0	
		1031	03.11-62	12/18/2013	Y	N			-	DCD_03.11-62 S01	0	
		1034	03.11-63	6/13/2013	Y	N	N		-	DCD_03.11-63	5	4
		1034	03.11-63	12/6/2013	Y	N	N		-	DCD_03.11-63 S01	0	
		1034	03.11-64	6/13/2013	Y	N	N		-	DCD_03.11-64	5	4
		1034	03.11-65	6/13/2013	N	N	N		-	-	N/A	N/A
		1034	03.11-66	6/13/2013	Y	N	N		-	DCD_03.11-66	5	4
		1034	03.11-66	12/19/2013	Y	N	N		-	DCD_03.11-66 S02	0	
		1034	03.11-67	6/13/2013	Y	N	N		-	-	N/A	N/A
		1034	03.11-68	6/13/2013	N	N	N		-	-	N/A	N/A
		1034	03.11-69	6/13/2013	Y	N	N		-	DCD_03.11-69	5	4
3.12	ASME Code Class 1, 2, and 3	259	03.12-1	2009/4/17	Y	N	N		-	DCD_03.12-1	3	2
	Piping Systems,	259	03.12-2	2009/4/17	Y	N	N		-	DCD_03.12-2	3	2
	Piping Components	259	03.12-3	2009/4/17	Y	N	N		-	DCD_03.12-3	3	2
	and their Associated Supports	259	03.12-4	2009/4/17	Y	N	N		-	DCD_03.12-4	3	2
		260	03.12-5	2009/4/17	Y	N	N		-	DCD_03.12-5	3	2
		260	03.12-6	2009/4/17	Y	N	N		-	DCD_03.12-6	3	2
		260	03.12-7	2009/4/17	N	N	N		-	-	N/A	N/A
		260	03.12-8	2009/4/17	Y	N	N		-	DCD_03.12-8	3	2
		260	03.12-9	2009/4/17	N	N	N		-	-	N/A	N/A
		260	03.12-10	2009/4/17	N	N	N		-	-	N/A	N/A
		260	03.12-11	2009/4/17	N	N	N		-	-	N/A	N/A
		260	03.12-12	2009/4/17	N	N	N		-	-	N/A	N/A
		260	03.12-13	2009/4/17	Y	N	N		-	DCD_03.12-13	3	2
		260	03.12-14	2009/4/17	Y	N	N		-	DCD_03.12-14	3	2
		260	03.12-15	2009/4/17	Y	N	N		-	DCD_03.12-15	3	2
		260	03.12-16	2009/4/17	N	N	N		-	-	N/A	N/A
		465	03.12-17	2009/12/2	Y	N	N		-	DCD_O3.12-17	1	3
		465	03.12-18	2009/11/18	N	N	N		-	-	N/A	N/A
		465	03.12-19	2009/11/18	Y	N	N		-	DCD_03.12-19	0	3
		465	03.12-20	2009/11/18	Y	N	N		-	DCD_03.12-20	0	3
		465	03.12-21	2009/11/18	N	N	N		-	-	N/A	N/A
		465	03.12-22	2009/11/18	N	N	N		-	-	N/A	N/A
		465	03.12-23	2009/12/2	Y	N	N		-	DCD_03.12-23	1	3
		465	03.12-24	2009/11/18	Y	N	N		-	DCD_03.12-24	0	3

Chapter:3

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		742	03.12-25	2011/7/8	Y	N	N		-	DCD_03.12-25	0	4
		742	03.12-25	10/26/2011	Y	Y	N		-	DCD_03.12-25	1	4
		742	03.12-25	7/6/2012	Y	Y	N		-	DCD_03.12-25 S01	-	4
		804	03.12-26	11/10/2011	N	N	N		-	-	N/A	N/A
		804	03.12-26	9/19/2012	Y	N	N		-	DCD_03.12-26	3	4
		804	03.12-27	11/10/2011	Y	N	N		-	DCD_03.12-27	1	4
		804	03.12-28	11/10/2011	Y	N	N		-	DCD_03.12-28	1	4
		804	03.12-29	11/25/2011	Y	N	N		-	DCD_03.12-29	1	4
		804	03.12-29	5/8/2013	Y	N	N		-	DCD_03.12-29	4	4
		846	03.12-30	11/18/2011	Y	N	N		-	DCD_03.12-30	1	4
3.13	Threaded Fasteners -	273	3.13-1	2009/4/9	Y	N	N		-	DCD_3.13-1	3	2
	ASME Code Class 1, 2, and 3	273	3.13-2	2009/4/9	Y	N	N		-	DCD_3.13-2	3	2
		273	3.13-3	2009/4/9	Y	N	N		-	DCD_3.13-3	3	2
		273	3.13-4	2009/4/9	Y	N	N		-	DCD_3.13-4	3	2
		273	3.13-5	2009/4/9	Y	N	N		-	DCD_3.13-5	3	2
		-	-	-	-	-	-	-	COL3.13(1) deleted	MAP-03-015	-	2
		-	-	-	-	-	-	-	COL3.13(2) deleted	MAP-03-016	-	2

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
4.2	Fuel System Design	129	04.02-1	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-2	2009/1/30	Y	N	N		-	DCD_04.02-2	2	2
		129	04.02-3	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-4	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-5	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-6	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-7	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-8	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-9	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-10	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-10	12/14/2011	N	N	N		-	-	N/A	N/A
		129	04.02-11	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-12	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-12	4/17/2012	N	N	N		-	-	N/A	N/A
		129	04.02-13	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-14	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-15	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-16	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-17	2009/1/30	Y	N	N		-	DCD_04.02-17	2	2
		129	04.02-18	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-18	12/14/2011	Y	N	N			DCD_04.02-18	1	4
		129	04.02-18	02/23/2012	Y	N	N		-	DCD_04.02-18	2	4
		129	04.02-18	6/18/2012	Y	N	N		-	DCD_04.02-18	3	4
		129	04.02-19	2009/1/30	N	N	N		-	-	N/A	N/A
		129	04.02-19	12/14/2011	Y	N	N			DCD_04.02-19	1	4
		129	04.02-19	02/23/2012	Y	N	N		-	DCD_04.02-19	2	4
		129	04.02-19	6/18/2012	Y	N	N		-	DCD_04.02-19	3	4
		129	04.02-20	2009/1/30	N	N	N		-	-	N/A	N/A
				12/14/2011	N	N	N			-	N/A	N/A
		476	4.1-***1	2009/12/11	N	N	N		-	-	N/A	N/A
		476	4.1-***2	2009/12/11					-			
		476	4.1-***3	2009/12/11	N	N	N		-	-	N/A	N/A
		477	4.2-***1	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***2	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***3	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***4	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***5	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***6	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***7	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***8	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***9	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***10	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***11	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***12	2009/12/18	N	N	N		-	-	N/A	N/A
		477	4.2-***13	2009/12/18	N	N	N		-	-	N/A	N/A
		519	04.02-37	2/25/2010	N	N	N		-	-	N/A	N/A
		519	04.02-38	2/25/2010	N	N	N		-	-	N/A	N/A
		519	04.02-39	2/25/2010	N	N	N		-	-	N/A	N/A
		519	04.02-40	2/25/2010	N	N	N		-	-	N/A	N/A
		519	04.02-41	2/25/2010	N	N	N		-	-	N/A	N/A
		519	04.02-42	2/25/2010	N	N	N		-	-	N/A	N/A
		572	04.02-43	2010/5/14	N	N	N		-	-	N/A	N/A
		572	04.02-43	2013/6/28	N	N	N		-	-	N/A	N/A
		572	04.02-44	2010/5/14	N	N	N		-	-	N/A	N/A
		869	04.02-45	12/14/2011	N	N	N		-	-	N/A	N/A
				02/09/2012	N	N	N		-	-	N/A	N/A
		877	04.02-46	01/11/2012	N	N	N		-	-	N/A	N/A
		877	04.02-47	01/11/2012	N	N	N		-	-	N/A	N/A
		877	04.02-48	01/11/2012	N	N	N		-	-	N/A	N/A
		877	04.02-49	01/11/2012	N	N	N		-	-	N/A	N/A
		877	04.02-50	01/11/2012	N	N	N		-	-	N/A	N/A
		893	04.02-51	02/23/2012	Y	N	N		-	DCD_04.02-51	2	4
		893	04.02-51	6/18/2012	Y	N	N		-	DCD_04.02-51	3	4

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		928	04.02-52	6/21/2012	N	N	N		-	-	N/A	N/A
		929	04.02-53	7/10/2012	N	N	N		-	-	N/A	N/A
		929	04.02-54	7/10/2012	N	N	N		-	-	N/A	N/A
		929	04.02-55	7/10/2012	N	N	N		-	-	N/A	N/A
		929	04.02-56	7/10/2012	N	N	N		-	-	N/A	N/A
		929	04.02-57	7/10/2012	N	N	N		-	-	N/A	N/A
		929	04.02-57	7/12/2013	N	N	N		-	-	N/A	N/A
		948	04.02-58	8/10/2012	N	N	N		-	-	N/A	N/A
		948	04.02-59	8/10/2012	N	N	N		-	-	N/A	N/A
		948	04.02-60	8/10/2012	N	N	N		-	-	N/A	N/A
		948	04.02-61	8/10/2012	N	N	N		-	-	N/A	N/A
		948	04.02-62	8/10/2012	N	N	N		-	-	N/A	N/A
		948	04.02-63	8/10/2012	N	N	N		-	-	N/A	N/A
		953	04.02-64	9/27/2012	N	N	N		-	-	N/A	N/A
		953	04.02-65	11/28/2012	N	N	N		-	-	N/A	N/A
		1039	04.02-66	7/4/2013	N	N	N		-	-	N/A	N/A
		1064	04.02-67	12/19/2013	N	N	N		-	-	N/A	N/A

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
4.3	Nuclear Design	202	04.03-1	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-2	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-3	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-4	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-5	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-6	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-7	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-8	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-9	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-10	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-11	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-12	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-13	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-14	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-14A	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-14B	2009/3/27	N	N	N		-	-	N/A	N/A
		202	04.03-14C	2009/3/27	N	N	N		-	-	N/A	N/A
		256	04.03-15	2009/3/30	N	N	N		-	-	N/A	N/A
		256	04.03-16	2009/3/30	N	N	N		-	-	N/A	N/A
		256	04.03-17	2009/3/30	N	N	N		-	-	N/A	N/A
		256	04.03-18	2009/4/27	N	N	N		-	-	N/A	N/A
		256	04.03-19	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-20	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-21	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-22	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-23	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-24	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-25	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-26	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-27	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-28	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-29	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-30	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-31	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-32	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-33	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-34	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-35	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-36	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-37	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-38	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-39	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-40	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-41	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-42	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-43	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-44	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-45	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-45A	2009/3/30	N	N	N		-	-	N/A	N/A
		257	04.03-45B	2009/3/30	N	N	N		-	-	N/A	N/A
		450	04.03-46	2009/9/24	N	N	N		-	-	N/A	N/A
		450	04.03-47	2009/9/24	N	N	N		-	-	N/A	N/A
		545	04.03-48	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-49	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-50	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-51	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-52	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-53	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-54	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-55	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-56	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-57	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-58	2010/4/2	N	N	N		-	-	N/A	N/A

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		545	04.03-59	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-60	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-61	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-62	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-63	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-64	2010/4/2	N	N	N		-	-	N/A	N/A
		545	04.03-65	2010/4/28	N	N	N		-	-	N/A	N/A
		545	04.03-66	2010/4/28	N	N	N		-	-	N/A	N/A
		717	04.03-67	2011/3/29	N	N	N		-	-	N/A	N/A
		874	04.03-68	01/10/2012	Y	N	N		-	DCD_04.03-68	2	4
		874	04.03-69	01/10/2012	Y	N	N		-	DCD_04.03-69	2	4
		910	04.03-70	04/05/2012	Y	N	N		-	DCD_04.03-70	-	4

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
4.4	Thermal and Hydraulic Design	377	04.04-1	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-2	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-2	11/08/2013	N	N	N		-	-	N/A	N/A
		377	04.04-3	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-4	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-4	2009/12/2	N	N	N		-	-	N/A	N/A
		377	04.04-4	11/08/2013	N	N	N		-	-	N/A	N/A
		378	04.04-5	11/085/2013	N	N	N		-	-	N/A	N/A
		377	04.04-5	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-6	2009/6/25	N	N	N		-	-	N/A	N/A
		378	04.04-7	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-5	2009/6/25	N	N	N		-	-	N/A	N/A
		377	04.04-6	2009/6/25	N	N	N		-	-	N/A	N/A
		378	04.04-7	2009/6/25	N	N	N		-	-	N/A	N/A
		530	04.04-8	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-9	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-10	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-11	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-12	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-13	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-14	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-15	2010/3/4	Y	N	N		-	DCD_04.04-15	3	3
		530	04.04-16	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-17	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-18	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-19	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-20	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-21	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-22	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-23	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-24	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-25	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-26	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-27	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-28	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-29	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-30	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-31	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-32	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-33	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-34	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-35	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-36	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-37	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-38	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-39	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-40	2010/3/4	N	N	N		-	-	N/A	N/A
		530	04.04-40	5/29/2012	N	N	N		-	-	N/A	N/A
		845	04.04-41	11/11/2011	N	N	N		-	-	N/A	N/A
		952	04.04-42	9/7/2012	N	N	N		-	-	N/A	N/A
		952	04.04-42	11/08/2013	N	N	N		-	-	N/A	N/A
		994	04.04-43	3/19/2013	N	N	N		-	-	N/A	N/A
		994	04.04-43	7/5/2013	Y	N	N		-	DCD_04.04-43	0	
		1063	04.04-44	12/10/2013	Y	Y	N		-	DCD_04.04-44	0	

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
4.5.1	Control Rod Drive	268	4.5.1-1	2009/4/28	Y	N	N		-	DCD_4.5.1-1	3	2
	Structural Materials	268	4.5.1-2	2009/4/28	Y	N	N		-	DCD_4.5.1-2	3	2
		268	4.5.1-3	2009/4/28	N	N	N		-	-	N/A	N/A
		268	4.5.1-4	2009/4/28	Y	N	N		-	DCD_4.5.1-4	3	2
		268	4.5.1-5	2009/4/28	Y	N	N		-	DCD_4.5.1-5	3	2
		268	4.5.1-6	2009/4/28	Y	N	N		-	DCD_4.5.1-6	3	2
		268	4.5.1-7	2009/4/28	Y	N	N		-	DCD_4.5.1-7	3	2
		457	04.5.01-8	10/29/2009	Y	N	N		-	DCD_04.5.01-8	0	3
		457	04.5.01-8	2011/7/15	Y	N	N		-		1	4
		457	04.5.01-9	10/29/2009	Y	N	N		-	DCD_04.5.01-9	0	3
		457	04.5.01-10	10/29/2009	Y	N	N		-	DCD_04.5.01-10	0	3
		457	04.5.01-10	2010/3/29	Y	N	N		-	DCD_04.5.01-10	3	3
		654	04.05.01-11	12/03/2010	Y	N	N		-	DCD_04.5.01-11	6	3
		654	04.05.01-11	7/15/2011	Y	N	N		-	DCD_04.5.01-11	1	4
		654	04.05.01-12	12/03/2010	Y	N	N		-	DCD_04.5.01-12	6	3
		654	04.05.01-13	12/03/2010	Y	N	N		-	DCD_04.5.01-13	6	3
		654	04.05.01-14	12/03/2010	Y	N	N		-	DCD_04.5.01-14	6	3
		654	04.05.01-15	12/03/2010	Y	N	N		-	DCD_04.5.01-15	6	3
		654	04.05.01-15	7/15/2011	Y	N	N		-	DCD_04.5.01-15	1	4
4.5.2	Reactor Internal and Core	269	4.5.2-1	2009/5/13	Y	N	N		-	DCD_4.5.2-1	3	2
	Support Structure Materials	269	4.5.2-2	2009/5/13	Y	N	N		-			
		269	4.5.2-2	2009/6/30	N	N	N		-	-	N/A	N/A
		269	4.5.2-3	2009/5/13	Y	N	N		-	DCD_4.5.2-3	3	2
		269	4.5.2-4	2009/5/13	N	N	N		-	-	N/A	N/A
		269	4.5.2-5	2009/5/13	Y	N	N		-	DCD_4.5.2-5	3	2
		414	4.5.2-6	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-7	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-8	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-9	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-10	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-11	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-12	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-13	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-14	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-15	2009/8/7	N	N	N		-	-	N/A	N/A
		414	4.5.2-16	2009/8/7	N	N	N		-	-	N/A	N/A
		502	4.5.2-17	2010/1/18	N	N	N		-	-	N/A	N/A
		502	4.5.2-18	2010/1/18	N	N	N		-	-	N/A	N/A
		502	4.5.2-18	2010/1/21	N	N	N		-	-	N/A	N/A
		502	4.5.2-19	2010/1/18	N	N	N		-	-	N/A	N/A
		502	4.5.2-20	2010/1/18	N	N	N		-	-	N/A	N/A
		527	4.5.2-21	2010/3/2	N	N	N		-	-	N/A	N/A
		573	4.5.2-22	2010/5/19	N	N	N		-	-	N/A	N/A
		620	4.5.2-23	2010/9/14	N	N	N		-	-	N/A	N/A
		653	4.5.2-24	2010/12/13	N	N	N		-	-	N/A	N/A
		784	4.5.2-25	2011/9/12	N	N	N		-	-	N/A	N/A
		784	4.5.2-25	2011/11/21	N	N	N		-	-	N/A	N/A
		784	4.5.2-25	4/2/2012	Y	N	N		-	DCD_04.05.02-25	-	4
4.6	Functional Design	316	4.6.1	2009/5/20	N	N	N		-	-	N/A	N/A
	of Control Rod Drive System	316	4.6.2	2009/5/20	Y	N	N		-	DCD_4.6.2	-	2
		316	4.6.3	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.4	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.5	2009/5/20	Y	N	N		-	DCD_4.6.5	-	2
		316	4.6.6	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.7	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.8	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.9	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.10	2009/5/20	N	N	N		-	-	N/A	N/A
		316	4.6.11	2009/5/20	Y	N	N		-	DCD_4.6.11	3	2

Chapter:4

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		913	04.06-12	4/26/2012	N	N	N		-	-	N/A	N/A

Chapter:5

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
5.2.1.1	Compliance with the Codes	264	05.02.01.01-1	2009/10/2	Y	Y	N		-	DCD_05.02.01.01-1	-	2
	and Standards Rule, 10 CFR 50.55a	264	05.02.01.01-1	2009/4/24	Y	N	N		-	DCD_05.02.01.01-2	3	2
		264	05.02.01.01-1	2009/4/24	Y	N	N		-	DCD_05.02.01.01-3	3	2
		264	05.02.01.01-1	2009/12/15	Y	Y	N		-	DCD_05.02.01.01-1	7	3
5.2.1.2	Applicable Code Cases	253	05.02.01.02-1	2009/4/17	N	N	N		-	-	N/A	N/A
		253	05.02.01.02-2	2009/4/17	Y	N	N		-	DCD_05.02.01.02-2	3	2
		253	05.02.01.02-3	2009/4/17	Y	N	N		-	DCD_05.02.01.02-3	3	2
		291	05.02.01.02-4	2009/4/17	N	N	N		-	-	N/A	N/A
		291	05.02.01.02-5	2009/4/17	Y	N	N		-	DCD_05.02.01.02-5	3	2
		315	05.02.01.02-6	2009/4/28	N	N	N		-	-	N/A	N/A
		575	05.02.01.02-7	2010/5/7	Y	N	N		-	DCD_05.02.01.02-7	7	3
		575	05.02.01.02-7	2011/4/26	Y	N	N		-		0	4
5.2.2	Overpressure Protection	103	05.02.02-1	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-2	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-3	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-4	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-5	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-6	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		103	05.02.02-7	2008/12/25	Y	N	N	fin.	-	DCD_05.02.02-7	0	2
		103	05.02.02-8	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
5.2.3	Reactor Coolant Pressure	224	05.02.03-1	2009/3/24	Y	N	N		-	DCD_05.02.03-1	3	2
	Boundary Materials	224	05.02.03-1	2009/10/2	Y	Y	N		-	DCD_05.02.03-1	-	2
		224	05.02.03-2	2009/3/24	Y	N	N		-	DCD_05.02.03-2	2	2
		224	05.02.03-3	2009/3/24	Y	N	N		-	DCD_05.02.03-3	3	2
		289	05.02.03-4	2009/5/13	Y	N	N		-	DCD_05.02.03-4	3	2
		289	05.02.03-5	2009/5/13	Y	N	N		-	DCD_05.02.03-5	3	2
		289	05.02.03-6	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-7	2009/5/13	Y	N	N		-	DCD_05.02.03-7	3	2
		289	05.02.03-8	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-9	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-10	2009/5/13	Y	N	N		-	DCD_05.02.03-10	3	2
		289	05.02.03-11	2009/5/13	Y	N	N		-	DCD_05.02.03-11	4	2
		289	05.02.03-12	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-13	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-14	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-15	2009/5/13	N	N	N		-	-	N/A	N/A
		289	05.02.03-16	2009/5/13	N	N	N		-	-	N/A	N/A
		350	05.02.03-17	2009/6/18	Y	N	N		-	DCD_05.02.03-17	3	2
		289	05.02.03-12	2010/3/1	Y	N	N		-	DCD_O5.02.03-12	7	3
		509	05.02.03-18	2010/1/29	N	N	N		-	-	N/A	N/A
		540	05.02.03-19	2010/6/4	Y	N	N		-	DCD_O5.02.03-19	7	3
		540	05.02.03-20	2010/6/4	N	N	N		-	-	N/A	N/A
		540	05.02.03-21	2010/6/4	Y	N	N		-	DCD_O5.02.03-21	7	3
		540	05.02.03-22	2010/6/4	Y	N	N		-	DCD_O5.02.03-22	7	3
		540	05.02.03-23	2010/6/4	Y	N	N		-	DCD_O5.02.03-23	7	3
		540	05.02.03-24	2010/6/4	N	N	N		-	-	N/A	N/A
		540	05.02.03-25	2010/6/4	N	N	N		-	-	N/A	N/A
		-	-	-	-	-	-	-	COL 5.2(4) revised	MAP-05-001	TBD	
		-	-	-	-	-	-	-	COL 5.2(5) revised	MAP-05-002	TBD	
		644	05.02.03-26	2010/11/8	Y	N	N		-	DCD_05.02.03-26	7	3
		644	05.02.03-27	2010/11/8	Y	N	N		-	DCD_05.02.03-27	7	3
		644	05.02.03-27	2011/2/20	Y	N	N		-	DCD_05.02.03-27	0	4
		644	05.02.03-28	2010/11/8	Y	N	N		-	DCD_05.02.03-28	7	3
		644	05.02.03-29	2010/11/8	Y	N	N		-	DCD_05.02.03-29	7	3
		644	05.02.03-30	2010/11/8	N	N	N		-	-	N/A	N/A

Chapter:5

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		644	05.02.03-30	2011/2/20	N	N	N		-	-	N/A	N/A
		644	05.02.03-31	2010/11/8	N	N	N		-	-	N/A	N/A
		644	05.02.03-31	2011/2/20	N	N	N		-	-	N/A	N/A

Chapter:5

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
5.2.4	Reactor Coolant Pressure Boundary	254	05.02.04-1	2009/4/17	Y	N	N		-	DCD_05.02.04-1	3	2
	Inservice Inspection and Testing	254	05.02.04-2	2009/4/17	Y	N	N		-	DCD_05.02.04-2	3	2
		254	05.02.04-3	2009/4/17	Y	N	N		-	DCD_05.02.04-3	3	2
		254	05.02.04-4	2009/4/17	Y	N	N		-	DCD_05.02.04-4	3	2
		254	05.02.04-5	2009/4/17	Y	N	N		-	DCD_05.02.04-5	3	2
		254	05.02.04-6	2009/4/17	N	N	N		-	-	N\A	N/A
		254	05.02.04-7	2009/4/17	Y	N	N		-	DCD_05.02.04.-7	3	2
		254	05.02.04-8	2009/4/17	Y	N	N		-	DCD_05.02.04.-8	3	2
		254	05.02.04-8	2009/10/2	Y	Y	N		-	DCD_05.02.04-8	-	2
5.2.5	Reactor Coolant Pressure Boundary	165	05.02.05-1	2009/2/20	Y	N	N		-	DCD_05.02.05-1	1	2
	Leakage Detection	165	05.02.05-2	2009/2/20	Y	N	N		-	DCD_05.02.05-2	1	2
		165	05.02.05-3	2009/2/20	Y	N	N		-	DCD_05.02.05-3	1	2
		165	05.02.05-4	2009/2/20	Y	N	N		-	DCD_05.02.05-4	1	2
		165	05.02.05-5	2009/2/20	N	N	N		-	-	N/A	N/A
		165	05.02.05-6	2009/2/20	Y	N	N		-	DCD_05.02.05-6	1	2
		438	05.02.05-7	2009/9/11	Y	Y 1.8	N		-	DCD_05.02.05-7	-	2
		438	05.02.05-8	2009/9/11	Y	N	N		-	DCD_05.02.05-8	-	2
		438	05.02.05-9	2009/9/11	Y	N	N		-	DCD_05.02.05-9	-	2
		438	05.02.05-10	2009/9/11	Y	Y 1.8	N		-	DCD_05.02.05-10	-	2
		478	05.02.05-11	2009/12/2	Y	N	N		-	DCD_05.02.05-11	1	3
		549	05.02.05-12	2010/4/9	Y	N	N		-	DCD_05.02.05-12	3	3
5.3.1	Reactor Vessel Materials	284	05.03.01-1	2009/4/23	N	N	N		-	-	N/A	N/A
		284	05.03.01-2	2009/4/23	Y	N	N		-	DCD_05.03.01.-2	3	2
5.3.2	Pressure-Temperature Limits,	285	05.03.02-1	2009/4/23	N	Y	N		-	-	N/A	N/A
	Upper-Shelf Energy,	588	05.03.02-2	2010/6/14	N	N	N		-	-	N/A	N/A
	and Pressurized Thermal Shock	588	05.03.02-3	2010/6/14	N	N	N		-	-	N/A	N/A
		588	05.03.02-4	2010/6/14	N	N	N		-	-	N/A	N/A
		588	05.03.02-5	2010/6/14	Y	N	N		-	DCD_05.03.02-5	4	3
		588	05.03.02-6	2010/6/14	N	N	N		-	-	N/A	N/A
		588	05.03.02-7	2010/6/14	N	N	N		-	-	N/A	N/A
		588	05.03.02-8	2010/6/14	N	N	N		-	-	N/A	N/A
		693	05.03.02-9	2011/3/22	Y	N	N		-	DCD_05.03.02-9	0	4
		693	05.03.02-10	2011/3/22	N	N	N		-	-	N/A	N/A
		694	05.03.02-11	2011/3/11	N	N	N		-	-	N/A	N/A
5.3.3	Reactor Vessel Integrity	225	05.03.03-1	2009/3/26	Y	N	N		-			
		225	05.03.03-1	2009/4/17	Y	N	N		-	DCD_05.03.03-1	3	2
5.4	Reactor Coolant System	47	5.4.10-1	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
	Component and Subsystem Design											
		745	05.04-2	2011/7/4	Y	N	N		-	DCD_05.04-2	0	4
		745	05.04-3	2011/7/4	N	N	N		-	-	N/A	N/A
5.4.1.1	Pump Flywheel Integrity (PWR)	274	05.04.01.01-1	2009/4/28	Y	N	N		-	DCD_05.04.01.01-1	3	2
		274	05.04.01.01-2	2009/4/28	N	N	N		-	-	N/A	N/A
		274	05.04.01.01-3	2009/4/28	Y	N	N		-	DCD_05.04.01.01-3	3	2
		274	05.04.01.01-3	2011/2/25	Y	N	N		-	DCD_05.04.01.01-3	-	3
		274	05.04.01.01-3	2011/4/14	Y	N	N		-	DCD_05.04.01.01-3	0	4
		274	05.04.01.01-4	2009/4/28	N	N	N		-	-	N/A	N/A

Chapter:5

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		274	05.04.01.01-5	2009/4/28	N	N	N		-	-	N/A	N/A
		274	05.04.01.01-6	2009/4/28	N	N	N		-	-	N/A	N/A
		274	05.04.01.01-7	2009/4/28	N	N	N		-	-	N/A	N/A
		738	05.04.01.01-8	2011/5/26	N	N	N		-	-	N/A	N/A
5.4.2.1	Steam Generator Materials	265	05.04.02.01-1	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-2	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-3	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-4	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-5	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-6	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-7	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-8	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-9	2009/3/25	Y	N	N		-	DCD_05.04.02.01-9	2	2
		265	05.04.02.01-10	2009/3/25	N	N	N		-	-	N/A	N/A
		265	05.04.02.01-11	2009/3/25	N	N	N		-	-	N/A	N/A
		392	05.04.02.01-12	2009/6/29	N	N	N		-	-	N/A	N/A
		930	05.04.02.01-13	6/13/2012	N	N	N		-	-	N/A	N/A
		930	05.04.02.01-13	12/12/2012	N	N	N		-	-	N/A	N/A

Chapter:5

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
5.4.2.2	Steam Generator Program	293	05.04.02.02-1	2009/4/17	Y	N	N		-	DCD_05.04.02.02-1	4	2
		293	05.04.02.02-2	2009/4/17	Y	N	N		-	DCD_05.04.02.02-2	3	2
		293	05.04.02.02-3	2009/4/17	Y	N	N		-	DCD_05.04.02.02-3	4	2
		293	05.04.02.02-4	2009/4/17	Y	N	N		-	DCD_05.04.02.02-4	4	2
		293	05.04.02.02-5	2009/4/17	Y	N	N		-	DCD_05.04.02.02-5	4	2
		293	05.04.02.02-6	2009/4/17	Y	N	N		-	DCD_05.04.02.02-6	3	2
		293	05.04.02.02-7	2009/4/17	Y	N	N		-	DCD_05.04.02.02-7	3	2
		293	05.04.02.02-8	2009/4/17	N	N	N		-	-	N/A	N/A
		393	05.04.02.02-9	2009/6/30	N	N	N		-	-	N/A	N/A
5.4.7	Residual Heat Removal (RHR)	163	05.04.07-1	2009/2/19	N	N	N		-	-	N/A	N/A
	System	163	05.04.07-2	2009/2/19	N	N	N		-	-	N/A	N/A
		163	05.04.07-3	2009/2/19	Y	N	N		-	DCD_05.04.07-3	2	2
		163	05.04.07-4	2009/2/19	Y	N	N		-	DCD_05.04.07-4	1	2
		163	05.04.07-5	2009/2/19	N	N	N		-	-	N/A	N/A
		163	05.04.07-6	2009/2/19	Y	N	N		-	DCD_05.04.07-6	1	2
		464	05.04.07-7	2009/11/4	N	N	N		-	-	N/A	N/A
		464	05.04.07-8	2009/11/4	N	N	N		-	-	N/A	N/A
		464	05.04.07-9	2009/11/4	N	N	N		-	-	N/A	N/A
		464	05.04.07-10	2009/11/4	N	N	N		-	-	N/A	N/A
		464	05.04.07-11	2009/11/4	N	N	N		-	-	N/A	N/A
		464	05.04.07-11	2011/10/12	N	N	N		-	-	N/A	N/A
		464	05.04.07-11	8/6/2012	Y	Y	Y		-	DCD_05.04.07-11	3	4
		548	05.04.07-12	2010/4/6	Y	N	N		-	DCD_05.04.07-12	3	3
		617	05.04.07-13	2010/9/14	N	N	N		-	-	N/A	N/A
		925	05.04.07-14	6/25/2012	N	N	N		-	-	N/A	N/A
		979	05.04.07-15, 1-4	2/1/2013	N	N	N		-	-	N/A	N/A
		998	05.04.07-16	3/27/2013	Y	N	N		-	DCD_05.04.07-16	4	4
		998	05.04.07-16	11/21/2013	Y	Y	N		-	DCD_05.04.07-16 S1	0	
		998	05.04.07-16	2/3/2014	Y	N	N		-	DCD_05.04.07-16 S2	0	
		1035	05.04.07-17	7/4/2013	Y	N	N		-	DCD_05.04.07-17	5	4
		1035	05.04.07-17	9/27/2013	Y	N	N		-	DCD_05.04.07-17	N/A	N/A
5.4.10												
5.4.11	Pressurizer Relief Tank	741	05.04.11-1	2011/6/29	Y	N	N		-	DCD_05.04.11-1	0	4
		741	05.04.11-2	2011/6/29	N	N	N		-	-	N/A	N/A
		741	05.04.11-3	2011/6/29	N	N	N		-	-	N/A	N/A
5.4.12	Reactor Coolant System	48	5.4.12-1	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
	High Point Vents	48	5.4.12-2	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		48	5.4.12-3	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		48	5.4.12-4	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		48	5.4.12-5	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		48	5.4.12-6	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		OI	05.04.12-1	2009/10/2	N	N	N		-	-	N/A	N/A
		762	05.04.12-2	2011/7/7	Y	N	N		-	DCD_05.04.12-2	0	4
		762	0.5.04.12-2	2014/1/27	Y	N	N		-	DCD_05.04.12-2	0	
5-4	Branch Tecchnical Position	897	05-04BTP-1	03/08/2012	N	N	N		-	-	N/A	N/A
		897	05-04BTP-1	7/11/2012	N	N	N		-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.1.1	Engineered Safety Features	379	06.01.01-1	2009/7/10	Y	N	N		-	DCD_06.01.01-1	4	2
	Materials	379	06.01.01-2	2009/7/10	Y	N	N		-	DCD_06.01.01-2	4	2
		379	06.01.01-3	2009/7/10	Y	N	N		-	DCD_06.01.01-3	-	2
		379	06.01.01-4	2009/7/10	N	N	N		-	-	N/A	N/A
		379	06.01.01-5	2009/7/10	Y	N	N		-	DCD_06.01.01-5	4	2
		379	06.01.01-6	2009/7/10	N	N	N		-	-	N/A	N/A
		379	06.01.01-7	2009/7/10	Y	N	N		-	DCD_06.01.01-7	4	2
		379	06.01.01-8	2009/7/10	Y	N	N		-	DCD_06.01.01-8	4	2
		379	06.01.01-9	2009/7/10	Y	N	N		-	DCD_06.01.01-9	4	2
				2010/3/30	Y	N	N		-	DCD_06.01.01-9	3	3
		379	06.01.01-10	2009/7/10	Y	N	N		-	DCD_06.01.01-10	4	2
		487	06.01.01-11	2009/12/3	Y	N	N		-	DCD_06.01.01-11	1	3
		487	06.01.01-12	2009/12/3	N	N	N		-	-	N/A	N/A
		544	06.01.01-13	2010/4/21	Y	N	N		-	DCD_06.01.01-13	3	3
		544	06.01.01-14	2010/4/21	Y	N	N		-	DCD_06.01.01-14	3	3
		544	06.01.01-15	2010/4/21	N	N	N		-	-	N/A	N/A
		544	06.01.01-16	2010/4/21	N	N	N		-	-	N/A	N/A
		544	06.01.01-17	2010/4/21	Y	N	N		-	DCD_06.01.01-17	3	3
		544	06.01.01-18	2010/4/21	N	N	N		-	-	N/A	N/A
		544	06.01.01-19	2010/4/21	Y	N	N		-	DCD_06.01.01-19	3	3
		612	06.01.01-20	2010/8/25	Y	N	N		-	DCD_06.01.01-20	5	3
		612	06.01.01-21	2010/8/25	Y	N	N		-	DCD_06.01.01-21	1	
		612	06.01.01-22	2010/8/25	Y	N	N		-		5	3
		612	06.01.01-22	2010/10/7	Y	N	N		-	DCD_06.01.01-22	5	3
		612	06.01.01-23	2010/8/25	Y	N	N		-	DCD_06.01.01-23	5	3
		-	-	-	-	-	-	-	COL 6.1(1) deleted	MAP-06-001	-	2
		-	-	-	-	-	-	-	COL 6.1(2) deleted	MAP-06-002	-	2
		-	-	-	-	-	-	-	COL 6.1(3) deleted	MAP-06-003	1	2
		-	-	-	-	-	-	-	COL 6.1(4) deleted	MAP-06-004	1	2
		-	-	-	-	-	-	-	COL 6.1(5) deleted	MAP-06-005	-	2
6.1.2	Protective Coating Systems (Paints)	365	06.01.02-1	2009/6/12	Y	Y	N		-	DCD_06.01.02-1	3	2
	Organic Materials	365	06.01.02-1	2009/8/21	Y	Y	N		-	DCD_06.01.02-1	-	2
6.2.1	Containment Functional Design	110	06.02.01-1	2008/12/26	N	N	N	fin.	-	-	N/A	N/A
	Organic Materials	126	06.02.01-2	2009/1/29	Y	N	N		-	DCD_06.02.01-2	1	2
		126	06.02.01-3	2009/3/19	N	N	N		-	-	N/A	N/A
		126	06.02.01-4	2009/3/19	N	N	N		-	-	N/A	N/A
		126	06.02.01-5	2009/3/19	N	N	N		-	-	N/A	N/A
		126	06.02.01-6	2009/4/21	N	N	N		-	-	N/A	N/A
		331	06.02.01-7	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-8	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-9	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-10	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-11	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-12	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-13	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-14	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-15	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-16	2009/5/26	N	N	N		-	-	N/A	N/A
		331	06.02.01-17	2009/5/26	N	N	N		-	-	N/A	N/A
		-	-	-	-	-	-	-	COL 6.2(1) deleted	MAP-06-006	-	2
		923	06.02.01-21	5/30/2013	N	N	N		-	-	N/A	N/A
		923	06.02.01-21	2014/1/17	Y	N	N		-	DCD_06.02..02-21 S02	0	
		947	06.02.01-22	8/1/2012	Y	N	N		-	DCD_06.02..02-22	3	4
		947	06.02.01-23	8/1/2012	N	N	N		-	-	N/A	N/A
		947	06.02.01-24	8/1/2012	Y	N	N		-	DCD_06.02..02-22	3	4
		1029	06.02.01-25	5/30/2013	N	N	N		-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.2.1	Containment Functional Design	587	06.02.01.01.A-1	2010/6/7	N	N	N		-	-	N/A	N/A
	Organic Materials	623	06.02.01-18	2010/9/29	N	N	N		-	-	N/A	N/A
		623	06.02.01-19	2010/9/29	Y	N	N		-	-	N/A	N/A
		623	06.02.01-20	2010/9/29	N	N	N		-	-	N/A	N/A
		923	06.02.01-21	7/31/2012	N	N	N	-	-	-	N/A	N/A
		1048	06.02.01-26	9/9/2013	N	N	N	-	-	-	N/A	N/A
6.2.1.2	Subcompartment Analysis	6	06.02.01.02-1	2008/6/27	Y	N	N	fin.	-	DCD_06.02.01.02-1	1	2
		111	06.02.01.02-2	2009/2/17	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-3	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-4	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-5	2008/1/16	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-6	2008/1/16	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-7	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-8	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-9	2008/1/16	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-10	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-11	2009/2/2	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-12	2008/1/16	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-13	2008/1/16	N	N	N		-	-	N/A	N/A
		111	06.02.01.02-14	2008/1/16	N	N	N		-	-	N/A	N/A
6.2.1.3	Mass and Energy Release											
	Analysis for Postulated											
	Loss-of-Coolant Accidents											
6.2.1.4	Mass and Energy Release	112	06.02.01.04-1	2008/12/26	N	N	N	fin.	-	-	N/A	N/A
	Analysis for Postulated	113	06.02.01.04-2	2009/1/15	N	N	N		-	-	N/A	N/A
	Secondary System Pipe Ruptures	114	06.02.01.04-3	2008/12/26	N	N	N	fin.	-	-	N/A	N/A
	(LOCAs)											
6.2.1.5	Min. Containment Pressure	115	06.02.01.05-1	2008/12/25	Y	N	N	fin.	-	DCD_06.02.01.05-1	1	2
	Analysis for	116	06.02.01.05-2	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
	for Emergency Core Cooling Sys.	117	06.02.01.05-3	2009/1/15	N	N	N		-	-	N/A	N/A
	Performance Capability Studies	118	06.02.01.05-4	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		119	06.02.01.05-5	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		120	06.02.01.05-6	2008/12/25	Y	N	N	fin.	-	DCD_06.02.01.05-6	1	2
		121	06.02.01.05-7	2008/12/25	Y	N	N	fin.	-	DCD_06.02.01.05-7	1	2
		122	06.02.01.05-8	2008/12/25	N	N	N	fin.	-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.2.2	Containment	45	06.02.02-1	2008/8/26	Y	N	N	fin.	-	DCD_06.02.02-1	-	1
	Heat Removal Systems	45	06.02.02-2	2008/8/26	N	N	N	fin.	-	-	N/A	N/A
		45	06.02.02-3	2008/8/26	N	N	N	fin.	-	-	N/A	N/A
		45	06.02.02-4	2008/8/26	N	N	N	fin.	-	-	N/A	N/A
		84	06.02.02-5	2008/11/7	Y	N	N	fin.	-	DCD_06.02.02-5	1	2
		84	06.02.02-6	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		84	06.02.02-7	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		84	06.02.02-8	2008/11/7	Y	N	N	fin.	-	DCD_06.02.02-8	1	2
		84	06.02.02-9	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
		85	06.02.02-10	2009/11/12	Y	N	N	fin.	-	DCD_06.02.02-10	1	2
		85	06.02.02-11	2009/11/12	N	N	N	fin.	-	-	N/A	N/A
		263	06.02.02-12	2009/3/31	Y	N	N		-	DCD_06.02.02-12	3	2
		263	06.02.02-13	2009/3/31	N	N	N		-	-	N/A	N/A
		263	06.02.02-14	2009/3/31	N	N	N		-	-	N/A	N/A
		263	06.02.02-15	2009/3/31	N	N	N		-	-	N/A	N/A
		278	06.02.02-16	2009/4/10	Y	N	N		-	DCD_06.02.02-16	3	2
		330	06.02.02-17	2009/5/18	N	N	N		-	-	N/A	N/A
		349	06.02.02-18	2009/5/12	N	N	N		-	-	N/A	N/A
		354	06.02.02-19	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-20	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-21	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-22	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-23	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-24	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-24	10/16/2009	Y	N	N		-	DCD_06.02.02-24	-	
		354	06.02.02-24	05/29/2012	N	N	N		-	-	N/A	N/A
		354	06.02.02-24	7/27/2012	Y	N	N		-	-	N/A	N/A
		354	06.02.02-25	2009/7/7	Y	N	N		-	DCD_06.02.02-25	4	2
		354	06.02.02-26	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-27	2009/7/7	Y	N	N		-	DCD_06.02.02-27	4	2
		354	06.02.02-28	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-29	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-30	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-31	2009/7/7	Y	Y	N		-	DCD_06.02.02-31	4	2
		354	06.02.02-31	10/06/2009	Y	Y	N		-	DCD_06.02.02-31	-	2
		354	06.02.02-32	2009/7/7	Y	Y	N		-	DCD_06.02.02-32	-	2
		354	06.02.02-32	10/06/2009	Y	N	N		-	DCD_06.02.02-32	-	2
		354	06.02.02-33	2009/7/7	Y	Y	N		-	DCD_06.02.02-33	-	2
		354	06.02.02-33	10/06/2009	Y	N	N		-	DCD_06.02.02-33	-	2
		354	06.02.02-34	2009/7/7	Y	Y	N		-	DCD_06.02.02-34	-	2
		354	06.02.02-34	10/06/2009	Y	N	N		-	DCD_06.02.02-34	-	2
		354	06.02.02-35	2009/7/7	Y	Y	N		-	DCD_06.02.02-35	-	2
		354	06.02.02-35	10/06/2009	Y	N	N		-	DCD_06.02.02-35	-	2
		354	06.02.02-36	2009/7/7	Y	Y	N		-	DCD_06.02.02-36	-	2
		354	06.02.02-36	10/06/2009	Y	N	N		-	DCD_06.02.02-36	-	2
		354	06.02.02-37	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-38	2009/7/7	Y	N	N		-	DCD_06.02.02-38	-	2
		354	06.02.02-39	2009/7/7	N	N	N		-	-	N/A	N/A
		354	06.02.02-40	2009/7/7	Y	N	N		-	DCD_06.02.02-40	4	2
		354	06.02.02-41	2009/7/7	Y	N	N		-	DCD_06.02.02-41	-	2
		354	06.02.02-42	2009/7/7	Y	N	N		-	DCD_06.02.02-42	4	2
		354	06.02.02-43	2009/7/7	Y	N	N		-	DCD_06.02.02-43	4	2
		354	06.02.02-44	2009/7/17	Y	N	N		-	-	N/A	
		354	06.02.02-44	05/29/2012	N	N	N		-	-	N/A	N/A
		354	06.02.02-44	7/27/2012	Y	N	N		-	-	N/A	N/A
		366	06.02.02-45	2009/6/11	N	N	N		-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response								Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status					
		366	06.02.02-46	2009/6/11	Y	N	N			-	DCD_06.02.02-46	3	2
		366	06.02.02-47	2009/6/11	N	N	N			-	-	N/A	N/A
		366	06.02.02-48	2009/6/11	N	N	N			-	-	N/A	N/A
		366	06.02.02-49	2009/6/11	N	N	N			-	-	N/A	N/A
		366	06.02.02-50	2009/6/11	N	N	N			-	-	N/A	N/A
		366	06.02.02-51	2009/6/11	N	N	N			-	-	N/A	N/A
		422	06.02.02-52	2010/1/21	N	N	N			-	-	N/A	N/A
		466	06.02.02-53	2009/11/24	N	N	N			-	-	N/A	N/A
		466	06.02.02-54	2009/11/24	N	N	N			-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		466	06.02.02-55	2009/11/24	Y	N	N		-	DCD_06.02.02-55	1	3
		631	06.02.02-56	2010/10/21	N	N	N			-	N/A	N/A
		631	06.02.02-57	2010/10/21	N	N	N			-	N/A	N/A
		637	06.02.02-58	2010/10/21	N	N	N		-	-	N/A	N/A
		637	06.02.02-59	2010/10/21	N	N	N		-	-	N/A	N/A
		637	06.02.02-60	2010/10/21	Y	N	N			-	N/A	N/A
		645	06.02.02-61	2010/11/10	N	N	N		-	-	N/A	N/A
		652	06.02.02-62	2010/11/30	N	N	N		-	-	N/A	N/A
		-	-	-	-	-	-	-	COL 6.2(9) deleted	MAP-06-007	4	2
		736	06.02.02-63	2011/6/21	Y	N	N		-	DCD_06.02.02-63	0	4
		736	06.02.02-63	2011/7/13	Y	N	N		-		0	4
		740	06.02.02-64	2011/6/14	Y	N	N		-	DCD_06.02.02-64	0	4
		740	06.02.02-64	2011/8/31	Y	N	N		-	DCD_06.02.02-64	1	4
		740	06.02.02-64	1/31/2012	Y	N	N		-	-	N/A	N/A
		740	06.02.02-64	5/29/2012	Y	N	N		-	-	N/A	N/A
		746	06.02.02-65	2011/6/7	N	N	N		-	-	N/A	N/A
		836	06.02.02-66	11/11/2011	Y	N	N		-	DCD_06.02.02-66	1	4
		836	06.02.02-67	11/11/2011	Y	N	N		-	DCD_06.02.02-67	1	4
		836	06.02.02-68	11/11/2011	N	N	N		-	-	N/A	N/A
		839	06.02.02-69	1/31/2012	Y	N	Y		-	-	N/A	N/A
		839	06.02.02-70	1/31/2012	Y	N	Y		-	-	N/A	N/A
		839	06.02.02-71	1/31/2012	Y	N	Y		-	-	N/A	N/A
		839	06.02.02-72	1/31/2012	Y	N	Y		-	-	N/A	N/A
		839	06.02.02-73	1/31/2012	Y	N	Y		-	-	N/A	N/A
		839	06.02.02-73	7/27/2012	Y	N	N		-	-	N/A	N/A
		840	06.02.02-74	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-75	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-76	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-77	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-78	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-79	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-80	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-81	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-82	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-83	11/22/2011	N	N	N			-	N/A	N/A
		840	06.02.02-84	11/22/2011	Y	N	N			DCD_06.02.02-84	1	4
		840	06.02.02-85	11/22/2011	N	N	N			-	N/A	N/A
		857	06.02.02-86	11/22/2011	N	N	N			-	N/A	N/A
		885	06.02.02-87	02/09/2012	N	N	N			-	N/A	N/A
		912	06.02.02-88	04/27/2012	N	N	N			-	N/A	N/A
		912	06.02.02-88	06/13/2012	N	N	N			-	N/A	N/A
		921	06.02.02-89	05/29/2012	N	N	N			-	N/A	N/A
		921	06.02.02-89	07/27/2012	N	N	N			-	N/A	N/A
		921	06.02.02-90	05/29/2012	N	N	N			-	N/A	N/A
		921	06.02.02-91	05/29/2012	N	N	N			-	N/A	N/A
		921	06.02.02-92	05/29/2012	N	N	N			-	N/A	N/A
		921	06.02.02-93	05/29/2012	N	N	N			-	N/A	N/A
		1036	06.02.02-94	7/16/2013	Y	N	N			DCD_06.02.02-94	0	

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.2.3	Secondary Containment Functional	990	06.02.03-1	4/4/2013	Y	N	N		-	DCD_06.02.03-1	4	4
	Design											
6.2.4	Containment Isolation System	57	06.02.04-1	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-2	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-3	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-4	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-5	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-5	1	2
		57	06.02.04-6	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-7	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-8	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-8	1	2
		57	06.02.04-9	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-9	1	2
		57	06.02.04-10	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-11	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-12	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-13	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-14	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-15	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-16	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-16	1	2
		57	06.02.04-17	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-18	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-18	1	2
		57	06.02.04-19	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-19	1	2
		57	06.02.04-20	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-20	1	2
		57	06.02.04-21	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-21	1	2
		57	06.02.04-22	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-22	1	2
		57	06.02.04-23	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-23	1	2
		57	06.02.04-24	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-25	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-26	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-27	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-28	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-29	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-30	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-31	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-31	1	2
		57	06.02.04-32	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		57	06.02.04-33	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-33	1	2
		57	06.02.04-34	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-34	1	2
		57	06.02.04-35	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-35	1	2
		57	06.02.04-36	2008/9/22	Y	N	N	fin.	-	DCD_06.02.04-36	1	2
		279	06.02.04-37	2009/4/8	Y	N	N		-	DCD_06.02.04-37	3	2
		279	06.02.04-38	2009/4/8	Y	N	N		-	DCD_06.02.04-38	3	2
		279	06.02.04-39	2009/4/8	Y	N	N		-	DCD_06.02.04-39	3	2
		279	06.02.04-40	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-41	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-42	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-43	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-44	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-45	2009/4/8	N	N	N		-	-	N/A	N/A
		279	06.02.04-46	2009/4/8	Y	N	N		-	DCD_06.02.04-46	3	2
		279	06.02.04-47	2009/4/8	Y	N	N		-	DCD_06.02.04-47	3	2
		279	06.02.04-48	2009/4/8	Y	N	N		-	DCD_06.02.04-48	3	2
		279	06.02.04-49	2009/4/8	Y	N	N		-	DCD_06.02.04-49	3	2
		376	06.02.04-50	2009/6/16	Y	Y	N		-	DCD_06.02.04-50	4	2
		451	06.02.04-51	2009/9/29	Y	N	N		-	DCD_06.02.04-51	-	2
		451	06.02.04-52	2009/9/29	Y	N	N		-	DCD_06.02.04-52	-	2
		553	06.02.04-53	2010/4/19	Y	N	N		-	DCD_06.02.04-53	3	3

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		553	06.02.04-54	2010/4/19	Y	N	N		-	DCD_06.02.04-54	3	3
		-	-	-	-	-	-	-	COL 6.2(6) deleted	MAP-06-008	-	2
		729	06.02.04-55	2011/6/16	Y	N	N	-	-	DCD_06.02.04-55	0	4
		790	06.02.04-56	2011/9/1	N	N	N		-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.2.5	Combustible Gas Control	62	06.02.05-1	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
	in Containment	62	06.02.05-2	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-3	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-4	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-5	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-6	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-7	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-8	2008/10/1	Y	Y	N	fin.	-			
		62	06.02.05-8	2009/1/9	Y	N	N	fin.	-	DCD_06.02.05-8	1	2
		62	06.02.05-9	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-10	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-11	2008/10/1	N	N	N	fin.	-			
		62	06.02.05-11	2009/1/9	Y	Y	N	fin.	-	DCD_06.02.05-11	1	2
		62	06.02.05-12	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-13	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-14	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-15	2008/10/1	N	N	N	fin.	-			
		62	06.02.05-15	2009/1/9	Y	N	N	fin.	-	DCD_06.02.05-15	1	2
		62	06.02.05-16	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-17	2008/10/1	Y	N	N	fin.	-	DCD_06.02.05-17	-	2
		62	06.02.05-18	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-19	2008/10/1	N	N	N	fin.	-	-	N/A	N/A
		62	06.02.05-20	2008/10/1	Y	N	N	fin.	-	DCD_06.02.05-20	1	2
		62	06.02.05-21	2008/10/1	Y	N	N	fin.	-	DCD_06.02.05-21	1	2
		270	06.02.05-22	2009/6/5	Y	N	N		-	DCD_06.02.05-22	3	2
		270	06.02.05-23	2009/6/5	Y	N	N		-	DCD_06.02.05-23	3	2
		270	06.02.05-24	2009/6/5	Y	N	N		-	DCD_06.02.05-24	-	2
		270	06.02.05-25	2009/6/5	Y	N	N		-	DCD_06.02.05-25	-	2
		270	06.02.05-26	2009/6/5	Y	N	N		-	DCD_06.02.05-26	3	2
		270	06.02.05-27	2009/6/5	Y	N	N		-	DCD_06.02.05-27	3	2
		270	06.02.05-28	2009/6/5	Y	N	N		-	DCD_06.02.05-28	3	2
		270	06.02.05-29	2009/6/5	Y	N	N		-	DCD_06.02.05-29	3	2
		270	06.02.05-30	2009/6/5	Y	N	N		-	DCD_06.02.05-30	3	2
		270	06.02.05-31	2009/6/5	Y	N	N		-	DCD_06.02.05-31	3	2
		270	06.02.05-32	2009/6/5	Y	N	N		-	DCD_06.02.05-32	-	2
		270	06.02.05-33	2009/6/5	Y	N	N		-	DCD_06.02.05-33	3	2
		270	06.02.05-34	2009/6/5	Y	N	N		-	DCD_06.02.05-34	3	2
		471	6.2.5-35	11/6/2009	Y	N	N		-	DCD_6.2.5-35	0	3
		471	6.2.5-36	2010/5/28	N	N	N		-	-	N/A	N/A
		551	6.2.5-37	2010/4/20	Y	N	N		-	DCD_6.2.5-37	3	3
		551	6.2.5-38	2010/4/20	N	N	N		-	-	N/A	N/A
		-	-	-	-	-	-	-	COL 6.2(7) deleted	MAP-06-009	1	2
		635	6.2.5-39	2010/10/20	Y	N	N		-	DCD_6.2.5-39	6	3
		635	6.2.5-40	2010/10/20	Y	N	N		-	DCD_6.2.5-40	6	3
		696	6.2.5-41	2011/3/7	Y	N	N		-	DCD_6.2.5-41	0	4
		748	6.2.5-42	2011/5/27	N	N	N		-	-	N/A	N/A
		751	6.2.5-43	2011/6/3	Y	N	N		-	DCD_6.2.5-43	0	4
		803	06.02.05-44	9/9/2011	Y	N	N		-	DCD_6.2.5-44	1	4
		803	06.02.05-45	9/9/2011	Y	Y	Y		-	DCD_6.2.5-45	1	4
		873	06.02.05-46	6/27/2012	N	N	N		-	N/A	N/A	4

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.2.6	Containment Leakage Testing	50	06.02.06-1	2008/9/17	N	N	N	fin.	-	-	N/A	N/A
		50	06.02.06-2	2008/9/17	N	N	N	fin.	-			
		50	06.02.06-2	2009/1/9	Y	Y	N	fin.	-	DCD_06.02.06-2	1	2
		50	06.02.06-3	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-3	-	2
		50	06.02.06-4	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-4	3	2
		50	06.02.06-5	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-5	3	2
		50	06.02.06-6	2008/9/17	N	N	N	fin.	-	-	N/A	N/A
		50	06.02.06-7	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-7	3	2
		50	06.02.06-8	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-8	3	2
		50	06.02.06-9	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-9	1	2
		50	06.02.06-10	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-10	-	2
		50	06.02.06-11	2008/9/17	N	N	N	fin.	-	-	N/A	N/A
		50	06.02.06-12	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-12	-	2
		50	06.02.06-13	2008/9/17	Y	N	N	fin.	-	DCD_06.02.06-13	2	2
		267	06.02.06-14	2009/4/6	Y	N	N		-	DCD_06.02.06-14	3	2
		267	06.02.06-15	2009/4/6	Y	N	N		-	DCD_06.02.06-15	3	2
		267	06.02.06-16	2009/4/6	Y	N	N		-	DCD_06.02.06-16	3	2
		267	06.02.06-17	2009/4/6	Y	N	N		-	DCD_06.02.06-17	3	2
		267	06.02.06-18	2009/4/6	Y	N	N		-	DCD_06.02.06-18	3	2
		267	06.02.06-19	2009/4/6	N	N	N		-	-	N/A	N/A
		267	06.02.06-20	2009/4/6	-	-	-	-	-	Question Deleted	-	-
		267	06.02.06-21	2009/4/6	N	N	N		-	-	N/A	N/A
		267	06.02.06-22	2009/4/6	N	N	N		-	-	N/A	N/A
		472	06.02.06-23	2009/11/13	Y	N	N		-	DCD_06.02.06-23	1	3
		472	06.02.06-24	2009/11/13	Y	N	N		-	DCD_06.02.06-24	1	3
		472	06.02.06-25	2009/11/13	N	N	N		-	-	N/A	N/A
		472	06.02.06-26	2009/11/27	Y	N	N		-	DCD_06.02.06-26	1	3
		472	06.02.06-27	2009/11/27	Y	N	N		-	DCD_06.02.06-27	1	3
		552	06.02.06-28	2010/4/16	N	N	N		-	-	N/A	N/A
		552	06.02.06-29	2010/4/16	N	N	N		-	-	N/A	N/A
		552	06.02.06-30	2010/4/16	Y	N	N		-	DCD_06.02.06-30	3	3
		-	-	-	-	-	-	-	COL 6.2(8) revised	MAP-06-010	-	2
		648	06.02.06-31	2010/11/11	Y	N	N		-	DCD_06.02.06-31	6	3
		648	06.02.06-32	2010/11/11	Y	N	N		-	DCD_06.02.06-32	6	3
		648	06.02.06-33	2010/11/11	Y	N	N		-	DCD_06.02.06-33	6	3
		866	06.02.06-34	01/06/2012	Y	N	N		-	DCD_06.02.06-34	2	4
		918	06.02.06-35	6/7/2012	Y	N	N		-	DCD_06.02.06-35	3	4
		966	06.02.06-36	11/06/2012	Y	Y	Y		-	DCD_06.02.06-36	3	4
6.2.7	Fracture Prevention	347	06.02.07-1	2009/6/11	Y	Y	N		-	DCD_06.02.07-1	-	2
6.2.7	of											
	Containment Pressure Boundary											

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.3	Emergency Core Cooling System	391	06.03-1	2009/7/27	Y	N	N		-	DCD_06.03-1	4	2
		391	06.03-2	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-3	2009/7/27	Y	N	N		-	DCD_06.03-3	4	2
		391	06.03-4	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-5	2009/7/27	Y	N	N		-	DCD_06.03-5	4	2
		391	06.03-6	2009/7/27	Y	N	N		-	DCD_06.03-6	4	2
		391	06.03-7	2009/7/27	Y	N	N		-	DCD_06.03-7	4	2
		391	06.03-8	2009/7/27	Y	N	N		-	DCD_06.03-8	4	2
		391	06.03-9	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-10	2009/7/27	Y	N	N		-	DCD_06.03-10	4	2
		391	06.03-11	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-12	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-13	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-14	2009/7/27	Y	N	N		-	DCD_06.03-14	4	2
		391	06.03-15	2009/7/27	Y	N	N		-	DCD_06.03-15	4	2
		391	06.03-16	2009/7/27	Y	N	N		-	DCD_06.03-16	4	2
		391	06.03-17	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-18	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-19	2009/7/27	Y	N	N		-	DCD_06.03-19	4	2
		391	06.03-20	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-21	2009/7/27	Y	N	N		-	DCD_06.03-21	4	2
		391	06.03-22	2009/7/27	Y	N	N		-	DCD_06.03-22	4	2
		391	06.03-23	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-24	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-25	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-26	2009/7/27	Y	N	N		-	DCD_06.03-26	4	2
		391	06.03-27	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-28	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-29	2009/7/27	Y	N	N		-	DCD_06.03-29	4	2
		391	06.03-30	2009/7/27	Y	N	N		-	DCD_06.03-30	4	2
		391	06.03-31	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-32	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-33	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-34	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-35	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-36	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-37	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-38	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-39	2009/7/27	Y	N	N		-	DCD_06.03-39	4	2
		391	06.03-40	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-41	2009/7/27	Y	N	N		-	DCD_06.03-41	4	2
		391	06.03-42	2009/7/27	Y	N	N		-	DCD_06.03-42	4	2
		391	06.03-43	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-44	2009/7/27	Y	N	N		-	DCD_06.03-44	4	2
		391	06.03-45	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-46	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-47	2009/7/27	Y	N	N		-	DCD_06.03-47	4	2
		391	06.03-48	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-49	2009/7/27	Y	N	N		-	DCD_06.03-49	4	2
		391	06.03-50	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-51	2009/7/27	Y	N	N		-	DCD_06.03-51	4	2
		391	06.03-52	2009/7/27	Y	N	N		-	DCD_06.03-52	4	2
		391	06.03-53	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-54	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-55	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-56	2009/7/27	N	N	N		-	-	N/A	N/A
		391	06.03-57	2009/7/27	Y	N	N		-	DCD_06.03-57	4	2
		391	06.03-58	2009/7/27	Y	N	N		-	DCD_06.03-58	4	2
		407	06.03-59	2009/8/5	Y	Y	N		-	DCD_06.03-59	4	2
		407	06.03-60	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-61	2009/8/5	Y	Y	N		-	DCD_06.03-61	4	2
		407	06.03-61	2013/1/15	Y	N	N		-	DCD_06.03-61	-	4
		407	06.03-62	2009/8/5	N	N	N		-	-	N/A	N/A

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		407	06.03-63	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-63	2009/9/28	N	N	N		-	-	N/A	N/A
		407	06.03-64	2009/8/5	Y	N	N		-	DCD_06.03-64	4	2
		407	06.03-65	2009/8/5	Y	N	N		-	DCD_06.03-65	4	2
		407	06.03-66	2009/8/5	Y	N	N		-	DCD_06.03-66	4	2
		407	06.03-67	2009/8/5	Y	N	N		-	DCD_06.03-67	4	2
		407	06.03-68	2009/8/5	Y	N	N		-	DCD_06.03-68	4	2
		407	06.03-69	2009/8/5	Y	N	N		-	DCD_06.03-69	4	2
		407	06.03-70	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-71	2009/8/5	Y	N	N		-	DCD_06.03-71	4	2
		407	06.03-72	2009/8/5	Y	N	N		-	DCD_06.03-72	4	2
		407	06.03-73	2009/8/5	Y	N	N		-	DCD_06.03-73	-	2
		407	06.03-74	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-75	2009/8/5	Y	N	N		-	DCD_06.03-75	4	2
		407	06.03-76	2009/8/5	Y	N	N		-	DCD_06.03-76	4	2
		407	06.03-77	2009/8/5	Y	N	N		-	DCD_06.03-77	4	2
		407	06.03-78	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-79	2009/8/5	Y	N	N		-	DCD_06.03-79	4	2
		407	06.03-80	2009/8/5	Y	Y	N		-	DCD_06.03-80	4	2
		407	06.03-81	2009/8/5	Y	N	N		-	DCD_06.03-81	4	2
		407	06.03-82	2009/8/5	N	N	N		-	-	N/A	N/A
		407	06.03-83	2009/8/5	N	N	N		-	-	N/A	N/A
		597	06.03-84	2010/7/8	N	N	N		-	-	N/A	N/A
		597	06.03-85	2010/7/8	N	N	N		-	-	N/A	N/A
		597	06.03-86	2010/7/8	N	N	N		-	-	N/A	N/A
		597	06.03-84	2010/7/8	N	N	N		-	-	N/A	N/A
		597	06.03-85	2010/7/8	N	N	N		-	-	N/A	N/A
		597	06.03-86	2010/7/8	N	N	N		-	-	N/A	N/A
		626	06.03-87	2010/10/14	N	N	N		-	-	N/A	N/A
		695	06.03-88	2011/3/18	Y	N	N		-	DCD_06.03-88	0	4
		695	06.03-88	2012/5/31	Y	N	N		-	-	N/A	N/A
		695	06.03-89	2011/3/18	N	N	N		-	-	N/A	N/A
		695	06.03-90	2011/3/18	N	N	N		-	-	N/A	N/A
		695	06.03-91	2011/3/18	Y	N	N		-	DCD_06.03-91	0	4
		695	06.03-92	2011/3/18	Y	N	N		-	DCD_06.03-91	0	4
		695	06.03-93	2011/3/18	N	N	N		-	-	N/A	N/A
		695	06.03-94	2011/3/18	N	N	N		-	-	N/A	N/A
		695	06.03-95	2011/3/18	Y	N	N		-	DCD_06.03-95	0	4
		695	06.03-96	2011/3/18	N	N	N		-	-	N/A	N/A
		695	06.03-97	2011/3/18	N	N	N		-	-	N/A	N/A
		716	06.03-98	2011/3/24	N	N	N		-	-	N/A	N/A
		716	06.03-99	2011/3/24	N	N	N		-	-	N/A	N/A
		737	06.03-100	2011/5/30	N	N	N		-	-	N/A	N/A
		737	06.03-101	2011/5/30	N	N	N		-	-	N/A	N/A
		815	06.03-102	2011/9/22	N	N	N		-	-	N/A	N/A
		815	06.03-102	2012/1/31	N	N	N		-	-	N/A	N/A
		867	06.03-103	01/06/2012	Y	N	N		-	DCD_06.03-103	2	4
		881	06.03-104	03/30/2112	N	N	N		-	-	N/A	N/A
		932	06.03-105	6/28/2012	N	N	N		-	-	N/A	N/A
		949	06.03-109	7/17/2012	N	N	N		-	-	N/A	N/A
		949	06.03-110	7/17/2012	N	N	N		-	-	N/A	N/A
		982	06.03-111	2/8/2013	Y	N	N		-	DCD_06.03-111	4	4

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		997	06.03-112	3/25/2013	Y	N	N		-	DCD_06.03-112	4	4
		997	06.03-112	9/5/2013	Y	N	N		-	DCD_06.03-112	0	
		1014	06.03-113	4/10/2013	Y	N	N		-	DCD_06.03-113	4	4
		1014	06.03-114	4/10/2013	Y	N	N		-	DCD_06.03-114	4	4

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.4	Control Room Habitability System	26	06.04-1	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		26	06.04-2	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-1 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-2 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-2	1	2
		49	06.04-3 BPT	2008/9/16	Y	N	N	fin.	-			
		99	06.04-3 BPT	2008/12/8	Y	N	N	fin.	-	DCD_06.04-3	1	2
		49	06.04-4 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-5 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-6 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-6	1	2
		49	06.04-7 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-7	3	2
		49	06.04-8 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-9 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-9	(1)	2
		473	06.04-9 BPT	11/13/2009	Y	N	N		-	DCD_06.04-9	0	3
		49	06.04-10 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-11 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-11	1	2
		49	06.04-12 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-12	1	2
		49	06.04-13 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-14 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-15 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-15	1	2
		49	06.04-16 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-17 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-18 BPT	2008/9/16	Y	Y	N	fin.	-	-		
		49	06.04-18 BPT	2009/1/9	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-19 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-19	1	2
		49	06.04-20 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-20	1	2
		49	06.04-21 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-22 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		49	06.04-23 BPT	2008/9/16	Y	N	N	fin.	-	DCD_06.04-23	1	2
		49	06.04-24 BPT	2008/9/16	N	N	N	fin.	-	-	N/A	N/A
		338	06.04-4	2009/6/17	N	N	N		-	-	N/A	N/A
		338	06.04-5	2009/6/17	Y	N	N		-	DCD_06.04-5	3	2
		338	06.04-6A	2009/6/17	Y	N	N		-	DCD_06.04-6A	3	2
		338	06.04-7A	2009/6/17	Y	N	N		-	DCD_06.04-7A	3	2
		338	06.04-8	2009/6/17	Y	N	N		-	DCD_06.04-8	-	2
		501	06.04-10	2010/1/21	N	N	N		-	-	N/A	N/A
		559	06.04-11	9/20/2012	Y	N	N		-	DCD_06.04-11	3	4
		-	-	-	-	-	-	-	COL 6.4(2) revised	MAP-06-014	1	2
		-	-	-	-	-	-	-	COL 6.4(4) deleted	MAP-06-015	1	2
		559	06.04-11	2010/5/20	Y	N	N		-	DCD_06.04-11	4	3
		559	06.04-12	2010/5/20	Y	N	N		-	DCD_06.04-12	4	3
		559	06.04-13	2010/5/20	Y	N	N		-	DCD_06.04-13	4	3
		691	06.04-14	2011/3/9	Y	N	N		-	DCD_06.04-14	0	4
		917	06.04-15	6/4/2012	Y	N	N		-	DCD_06.04-15	3	4
		927	06.04-16	9/19/2012	Y	N	N		-	DCD_06.04-16	3	4
		955	06.04-17	10/3/2012	Y	N	N		-	DCD_06.04-17	3	4
6.5.1	ESF Atmosphere Cleanup Systems	73	06.05.01-1/6.5.1-1	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-1	4	2
		73	06.05.01-1/6.5.1-2	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-3	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-4	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-5	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-5	4	2
		73	06.05.01-1/6.5.1-6	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-6	-	2
		73	06.05.01-1/6.5.1-7	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-7	4	2
		73	06.05.01-1/6.5.1-8	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-9	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-10	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-11	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-12	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-12	4	2
		73	06.05.01-1/6.5.1-13	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-13	4	2
		73	06.05.01-1/6.5.1-14	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-14	4	2
		73	06.05.01-1/6.5.1-15	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-16	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-16	4	2

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		73	06.05.01-1/6.5.1-17	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-17	4	2
		73	06.05.01-1/6.5.1-18	2008/10/24	Y	N	N	fin.	-	DCD_06.05.01-18	4	2
		73	06.05.01-1/6.5.1-19	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		73	06.05.01-1/6.5.1-20	2008/10/24	N	N	N	fin.	-	-	N/A	N/A
		300	06.05.01-3	2009/5/15	Y	N	N		-	DCD_06.05.01-3	-	2
		300	06.05.01-4	2009/5/15	Y	N	N		-	DCD_06.05.01-4	4	2
		300	06.05.01-5	2009/5/15	Y	N	N		-	DCD_06.05.01-5	4	2
		300	06.05.01-6	2009/5/15	N	N	N		-	-	N/A	N/A
		300	06.05.01-7	2009/5/15	Y	N	N		-	DCD_06.05.01-7	4	2
		449	06.05.01-8	2009/9/29	Y	N	N		-	DCD_06.05.01-8	-	2
		558	06.05.01-9	2010/5/27	Y	N	N		-	DCD_06.05.01-9	4	3
		558	06.05.01-10	2010/4/22	N	N	N		-	-	N/A	N/A
		558	06.05.01-11	2010/4/22	Y	N	N		-	DCD_06.05.01-11	3	3
		558	06.05.01-12	2010/4/22	Y	N	N		-	DCD_06.05.01-12	3	3
		558	06.05.01-13	2010/4/22	Y	N	N		-	DCD_06.05.01-13	3	3
		558	06.05.01-14	2010/4/22	Y	N	N		-	DCD_06.05.01-14	3	3
		558	06.05.01-15	2010/4/22	Y	N	N		-	DCD_06.05.01-15	3	3
		558	06.05.01-16	2010/5/27	Y	N	N		-	DCD_06.05.01-16	4	3
		558	06.05.01-17	2010/5/27	Y	N	N		-	DCD_06.05.01-17	4	3
		558	06.05.01-18	2010/4/22	Y	N	N		-	DCD_06.05.01-18	3	3
		-	-	-	-	-	-	-	COL 6.5(4) deleted	MAP-06-016	2	2
		615	06.05.01-19	2010/9/29	Y	N	N		-	DCD_06.05.01-19	5	3
		615	06.05.01-20	2010/9/29	Y	N	N		-	DCD_06.05.01-20	5	3
		826	06.05.01-21	2011/10/6	Y	N	N		-	DCD_06.05.01-21	1	4
		826	06.05.01-22	2011/10/6	Y	N	N		-	DCD_06.05.01-22	1	4

Chapter:6

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
6.5.2	Containment Spray	234	06.05.02-1	2009/4/22	N	N	N		-	-	N/A	N/A
	as a Fission Product	234	06.05.02-2	2009/3/24	N	N	N		-	-	N/A	N/A
	Cleanup System	234	06.05.02-3	2009/4/22	N	N	N		-	-	N/A	N/A
		234	06.05.02-4	2009/3/24	N	N	N		-	-	N/A	N/A
		416	06.05.02-5	2009/7/28	N	N	N		-	-	N/A	N/A
		416	06.05.02-6	2009/7/28	Y	N	N		-	DCD_06.05.02-6	-	2
		460	06.05.02-7	11/13/2009	N	N	N		-	-	N/A	N/A
		517	06.05.02-8	2010/2/25	N	N	N		-	-	N/A	N/A
		715	06.05.02-9	2011/4/18	N	N	N		-	-	N/A	N/A
		715	06.05.02-9	6/1/2012	N	N	N		-	-	N/A	N/A
		794	06.05.02-10	8/31/2011	N	N	N		-	-	N/A	N/A
		794	06.05.02-11	8/31/2011	N	N	N		-	-	N/A	N/A
		794	06.05.02-12	8/31/2011	N	N	N		-	-	N/A	N/A
		794	06.05.02-13	8/31/2011	N	N	N		-	-	N/A	N/A
6.5.3	Fission Product	37	06.05.03-1	2008/9/5	Y	N	N	fin.	-	DCD_06.05.03-1	1	2
	Control Systems and Structures	83	06.05.03-2	2008/11/7	N	N	N	fin.	-	-	N/A	N/A
	Fission Product											
6.5.5	Pressure Suppression Pool											
	as a											
	Fission Product Cleanup System											
6.6	Inservice Inspection and Testing	232	06.06-1	2009/3/26	Y	N	N		-	DCD_06.06-1	2	2
	of Class 2 and 3 Components											
		-	-	-	-	-	-	-	COL 6.6(1) revised	MAP-06-017	-	2
		-	-	-	-	-	-	-	COL 6.6(2) revised	MAP-06-018	4	2
6.6.2	Inservice Inspection and Testing	233	06.06-2	2009/4/16	Y	N	N		-	DCD_06.06-2	3	2
	of Class 2 and 3 Components											
6.6.3	Inservice Inspection and Testing	241	06.06-3	2009/4/16	Y	N	N		-	DCD_06.06-3	3	2
	of Class 2 and 3 Components											
6.6.4	Inservice Inspection and Testing	258	06.06-4	2009/4/16	Y	N	N		-	DCD_06.06-4	3	2
6.6.4	Inservice Inspection and Testing											
	of Class 2 and 3 Components											

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
7.1	Instrumentation and Controls --	244	07-14-1	2009/4/1	N	N	N		-	-	N/A	N/A
	Introduction	244	07-14-2	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-3	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-4	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-5	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-6	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-7	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-8	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-9	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-10	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-11	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-12	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-13	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-14	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-15	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-16	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-17	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-18	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-19	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-20	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-21	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-22	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-23	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-24	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-25	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-26	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-27	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-28	2009/4/1	N	N	N		-	-	N/A	N/A
		244	07-14-29	2009/4/1	N	N	N		-	-	N/A	N/A
		229	07.01-1	2009/4/28	Y	N	N		-	DCD_07.01-1	3	2
		229	07.01-2	2009/4/28	Y	N	N		-	DCD_07.01-2	3	2
		229	07.01-3	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-4	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-5	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-6	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-7	2009/4/28	Y	N	N		-	DCD_07.01-7	3	2
		229	07.01-8	2009/4/28	Y	N	N		-	DCD_07.01-8	3	2
		229	07.01-9	2009/4/28	Y	N	N		-	DCD_07.01-9	3	2
		229	07.01-10	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-11	2009/4/28	Y	N	N		-	DCD_07.01-11	3	2
		229	07.01-12	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-13	2009/4/28	Y	N	N		-	DCD_07.01-13	3	2
		229	07.01-14	2009/4/28	Y	N	N		-	DCD_07.01-14	3	2
		229	07.01-15	2009/4/28	Y	N	N		-	DCD_07.01-15	3	2
		229	07.01-16	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-17	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-18	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-19	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-20	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-21	2009/4/28	Y	N	N		-	DCD_07.01-21	3	2
		229	07.01-22	2009/4/28	N	N	N		-	-	N/A	N/A
		229	07.01-23	2009/4/28	N	N	N		-	-	N/A	N/A
		516	07.01-C Appendix-1	2010/2/15	N	N	N		-	-	N/A	N/A
		680	07.01-24	XX/YY/2011								
		692	07.01-25	2011/4/28	Y	N	N		-	DCD_07.01-25	0	4
		698	07.01-26	2011/4/28	Y	N	N		-	DCD_07.01-26	0	4
		705	07.01-27	5/31/2011	Y	N	N		-	DCD_07.01-27	0	4
		720	07.01-28	2011/4/28	Y	N	N		-	DCD_07.01-26	0	4
		722	07.01-29	5/31/2011	Y	N	N		-	DCD_07.01-29	0	4
		722	07.01-29	6/13/2013	Y	N	N		-	DCD_07.01-29	5	4
		722	07.01-30	5/31/2011	Y	N	N		-	DCD_07.01-30	0	4
		730	07.01-31	5/31/2011	N	N	N		-	-	N/A	N/A
		730	07.01-32	5/31/2011	N	N	N		-	-	N/A	N/A

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		730	07.01-32	6/20/2013	Y	N	N		-	DCD_07.01-32	5	4
		731	07.01-33	5/31/2011	N	N	N		-	-	N/A	N/A
		732	07.01-34	5/31/2011	N	N	N		-	-	N/A	N/A
		733	07.01-35	5/31/2011	N	N	N		-	-	N/A	N/A
		733	07.01-35	8/12/2011	Y	N	N		-	DCD_07.01-35	1	4
		733	07.01-36	5/31/2011	N	N	N		-	-	N/A	N/A
		734	07.01-37	5/31/2011	N	N	N		-	-	N/A	N/A
		734	07.01-37	10/04/2011	N	N	N		-	-	N/A	N/A
		734	07.01-38	5/31/2011	N	N	N		-	-	N/A	N/A
		734	07.01-38	10/04/2011	N	N	N		-	-	N/A	N/A
		734	07.01-39	5/31/2011	N	N	N		-	-	N/A	N/A
		734	07.01-39	10/04/2011	N	N	N		-	-	N/A	N/A
		771	07.01-40	8/1/2011	N	N	N		-	-	N/A	N/A
		771	07.01-41	8/1/2011	N	N	N		-	-	N/A	N/A
		771	07.01-42	8/1/2011	Y	N	N		-	DCD_07.01-42	1	4
		771	07.01-43	8/1/2011	N	N	N		-	-	N/A	N/A
		837	07.01-44	2/27/2012	N	N	N		-	-	N/A	N/A
		995	07.01-45	11/11/2013	Y	N	N		-	DCD_07.01-15	0	

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
7.2	Reactor Trip System	226	07.02-1	2009/4/28	Y	N	N		-	DCD_07.02-1	3	2
		226	07.02-2	2009/4/28	N	N	N		-	-	N/A	N/A
		672	07.02-3	2011/1/7	Y	N	N		-	DCD_07.02-3	-	4
		672	07.02-3	2011/5/31	Y	N	N		-	DCD_07.02-3	0	4
		672	07.02-3	2011/7/1	Y	N	N		-	DCD_07.02-3	0	4
		672	07.02-4	2011/1/7	Y	N	N		-	DCD_07.02-4	-	4
		727	07.02-5	5/31/2011	Y	N	N		-	DCD_07.02-5	0	4
		727	07.02-6	5/31/2011	N	N	N		-	-	N/A	N/A
		727	07.02-6	2011/7/1	N	N	N		-	-	N/A	N/A
		727	07.02-6	2011/5/31	N	N	N		-	-	N/A	N/A
		727	07.02-7	5/31/2011	Y	N	N		-	DCD_07.02-7	0	4
7.3	Engineered Safety Features Systems	230	07.03-1	2009/4/28	Y	N	N		-	DCD_07.03-1	3	2
		230	07.03-2	2009/4/28	Y	N	N		-	DCD_07.03-2	3	2
		230	07.03-3	2009/4/28	Y	N	N		-	DCD_07.03-3	3	2
		230	07.03-4	2009/4/28	Y	N	N		-	DCD_07.03-4	3	2
		230	07.03-5	2009/4/28	Y	N	N		-	DCD_07.03-5	3	2
		230	07.03-6	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-7	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-8	2009/4/28	Y	N	N		-	DCD_07.03-8	3	2
		230	07.03-9	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-10	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-11	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-12	2009/4/28	Y	N	N		-	DCD_07.03-12	3	2
		230	07.03-13	2009/4/28	N	N	N		-	-	N/A	N/A
		230	07.03-14	2009/4/28	Y	N	N		-	DCD_07.03-14	3	2
		230	07.03-15	2009/4/28	N	N	N		-	-	N/A	N/A
7.4	Safe Shutdown Systems	227	07.04-1	2009/4/28	Y	N	N		-	DCD_07.04-1	3	2
		227	07.04-2	2009/4/28	Y	N	N		-	DCD_07.04-2	3	2
		227	07.04-3	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-4	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-5	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-6	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-7	2009/4/28	Y	N	N		-	DCD_07.04-7	3	2
		227	07.04-8	2009/4/28	Y	N	N		-	DCD_07.04-8	3	2
		227	07.04-9	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-10	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-11	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-12	2009/4/28	Y	N	N		-	DCD_07.04-12	3	2
		227	07.04-13	2009/4/28	Y	N	N		-	DCD_07.04-13	3	2
		227	07.04-14	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-15	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-16	2009/4/28	Y	N	N		-	DCD_07.04-16	3	2
		227	07.04-17	2009/4/28	Y	N	N		-	DCD_07.04-17	3	2
		227	07.04-18	2009/4/28	N	N	N		-	-	N/A	N/A
		227	07.04-19	2009/4/28	N	N	N		-	-	N/A	N/A
		671	07.04-20	2010/12/28	Y	N	N		-	DCD_07.04-20	0	4
		671	07.04-21	2010/12/28	Y	N	N		-	DCD_07.04-21	0	4
		671	07.04-22	2010/12/28	Y	N	N		-	DCD_07.04-22	0	4
7.5	Information Systems Important to Safety	238	07.05-1	2009/4/28	Y	N	N		-	DCD_07.05-1	3	2
		238	07.05-2	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-3	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-4	2009/4/28	Y	N	N		-	DCD_07.05-4	3	2
		238	07.05-5	2009/4/28	Y	N	N		-	DCD_07.05-5	3	2

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		238	07.05-6	2009/4/28	Y	N	N		-	DCD_07.05-6	3	2
		238	07.05-7	2009/4/28	Y	N	N		-	DCD_07.05-7	3	2
		238	07.05-8	2009/4/28	Y	N	N		-	DCD_07.05-8	3	2
		238	07.05-9	2009/4/28	Y	N	N		-	DCD_07.05-9	3	2
		238	07.05-10	2009/4/28	Y	N	N		-	DCD_07.05-10	3	2
		238	07.05-11	2009/4/28	Y	N	N		-	DCD_07.05-11	3	2
		238	07.05-12	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-13	2009/4/28	Y	N	N		-	DCD_07.05-13	3	2
		238	07.05-14	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-15	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-16	2009/4/28	N	N	N		-	-	N/A	N/A
		238	07.05-17	2009/4/28	Y	Y	N		-	DCD_07.05-17	3	2
		568	07.05-18	2010/4/28	Y	N	N		-	DCD_07.05-18	3	3
		568	07.05-18	9/11/2013	Y	N	N		-	DCD_07.05-18 S02	0	
		568	07.05-18	2011/4/28	Y	N	N		-	DCD_07.05-18	0	4
		656	07.05-19	12/16/2010	N	N	N		-	-	N/A	N/A
		656	07.05-19	5/31/2011	Y	N	N		-	DCD_07.05-19	0	4
		656	07.05-20	12/16/2010	N	N	N		-	-	N/A	N/A
		656	07.05-20	2011/4/8	Y	N	N		-	DCD_07.05-20	0	4

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
7.6	Interlock Systems	239	07.06-1	2009/4/28	Y	N	N		-	DCD_07.06-1	3	2
	Important to Safety	239	07.06-2	2009/4/28	Y	N	N		-	DCD_07.06-2	3	2
		239	07.06-3	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-3	2011/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-4	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-5	2009/4/28	Y	N	N		-	DCD_07.06-5	3	2
		239	07.06-6	2009/4/28	Y	N	N		-	DCD_07.06-6	3	2
		239	07.06-7	2009/4/28	Y	N	N		-	DCD_07.06-7	3	2
		239	07.06-8	2009/4/28	Y	N	N		-	DCD_07.06-8	3	2
		239	07.06-9	2009/4/28	Y	N	N		-	DCD_07.06-9	3	2
		239	07.06-10	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-11	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-12	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-13	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-14	2009/4/28	Y	N	N		-	DCD_07.06-14	3	2
		239	07.06-15	2009/4/28	N	N	N		-	-	N/A	N/A
		239	07.06-16	2009/4/28	Y	N	N		-	DCD_07.06-16	0	4
		239	07.06-16	2011/4/28	Y	N	N		-	DCD_07.06-17	0	4
		638	07.06-17	10/26/2010	Y	N	N		-	DCD_07.06-17	6	3
		638	07.06-18	10/26/2010	Y	N	N		-	DCD_07.06-18	6	3
		638	07.06-19	10/26/2010	Y	N	N		-	DCD_07.06-19	6	3
		638	07.06-20	10/26/2010	N	N	N		-	-	N/A	N/A
		638	07.06-21	10/26/2010	N	N	N		-	-	N/A	N/A
		638	07.06-21	04/28/2011	Y	N	N		-	DCD_07.06-21	0	4
		638	07.06-22	10/26/2010	Y	N	N		-	DCD_07.06-22	6	3
		638	07.06-23	10/26/2010	Y	N	N		-	DCD_07.06-23	6	3
		638	07.06-24	10/26/2010	Y	N	N		-	DCD_07.06-24	6	3
		702	07.06-25	5/31/2011	Y	N	N		-	DCD_07.06-25	0	4
		702	07.06-26	5/31/2011	Y	N	N		-	DCD_07.06-26	0	4
7.7	Control Systems	240	07.07-1	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-2	2009/4/28	Y	N	N		-	DCD_07.07-2	3	2
		240	07.07-3	2009/4/28	Y	N	N		-	DCD_07.07-3	3	2
		240	07.07-4	2009/4/28	Y	N	N		-	DCD_07.07-4	3	2
		240	07.07-5	2009/4/28	Y	N	N		-	DCD_07.07-5	3	2
		240	07.07-6	2009/4/28	Y	N	N		-	DCD_07.07-6	3	2
		240	07.07-7	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-8	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-9	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-10	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-11	2009/4/28	Y	N	N		-	DCD_07.07-11	3	2
		240	07.07-12	2009/4/28	Y	N	N		-	DCD_07.07-12	3	2
		240	07.07-13	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-14	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-15	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-16	2009/4/28	Y	N	N		-	DCD_07.07-16	3	2
		240	07.07-17	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-18	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-19	2009/4/28	Y	N	N		-	DCD_07.07-19	3	2
		240	07.07-20	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-21	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-22	2009/4/28	Y	N	N		-	DCD_07.07-22	3	2
		240	07.07-23	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-24	2009/4/28	Y	N	N		-	3DCD_07.07-24	3	2
		240	07.07-25	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-26	2009/4/28	N	N	N		-	-	N/A	N/A
		240	07.07-27	2009/4/28	N	N	N		-	-	N/A	N/A
		655	07.07-28	11/30/2010	N	N	N		-	-	N/A	N/A
		655	07.07-29	11/30/2010	N	N	N		-	-	N/A	N/A
		688	07.07-30	04/28/2011	Y	N	N		-	DCD_07.07-30	0	4
		688	07.07-31	04/28/2011	Y	N	N		-	DCD_07.07-31	0	4
		688	07.07-32	5/31/2011	Y	N	N		-	DCD_07.07-32	0	4

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		688	07.07-32	10/11/2011	Y	N	N		-	DCD_07.07-32	1	4
		688	07.07-32	02/27/2012	Y	N	N		-	DCD_07.07-32	2	4
		996	07.07-33	11/1/2013	Y	N	N		-	DCD_07.07-33	0	

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
7.8	Diverse I&C Systems	228	07.08-1	2009/4/28	Y	N	N		-	DCD_07.08-1	3	2
		228	07.08-2	2009/4/28	N	N	N		-	-	N/A	N/A
		228	07.08-3	2009/4/28	N	N	N		-	-	N/A	N/A
		228	07.08-4	2009/4/28	Y	N	N		-	DCD_07.08-4	3	2
		228	07.08-5	2009/4/28	N	N	N		-	-	N/A	N/A
		677	07.08-6	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-6	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-6	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-6	2011/8/1	N	N	N		-	-	N/A	N/A
		677	07.08-7	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-7	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-7	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-8	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-8	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-8	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-9	2/9/2011	Y	N	N		-	DCD_07.08-9	1	4
		677	07.08-9	2/10/2011	Y	N	N		-	DCD_07.08-9	0	4
		677	07.08-9	5/31/2011	Y	N	N		-	DCD_07.08-9	1	4
		677	07.08-10	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-10	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-10	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-11	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-11	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-11	2011/4/28	N	N	N		-	-	N/A	N/A
		677	07.08-11	201/5/31	N	N	N		-	-	N/A	N/A
		677	07.08-11	2011/8/12	N	N	N		-	-	N/A	N/A
		677	07.08-12	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-12	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-12	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-12	8/12/2011	N	N	N		-	-	N/A	N/A
		677	07.08-13	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-13	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-13	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-14	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-14	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-14	5/31/2011	N	N	N		-	-	N/A	N/A
		677	07.08-15	2/9/2011	N	N	N		-	-	N/A	N/A
		677	07.08-15	2/10/2011	N	N	N		-	-	N/A	N/A
		677	07.08-15	5/31/2011	N	N	N		-	-	N/A	N/A
		700	07.08-16	2011/4/28	Y	N	N		-	DCD_07.08-16	0	4
		700	07.08-16	2011/5/31	Y	N	N		-			4
		753	07.08-17	9/30/2011	Y	N	N		-	DCD_07.08-17	1	4
		753	07.08-18	9/30/2011	N	N	N		-	-	N/A	N/A
		753	07.08-19	9/30/2011	N	N	N		-	-	N/A	N/A
		753	07.08-20	9/30/2011	N	N	N		-	-	N/A	N/A
		753	07.08-21	9/30/2011	N	N	N		-	-	N/A	N/A
		753	07.08-22	9/30/2011	N	N	N		-	-	N/A	N/A
		775	07.08-23	9/13/2011	Y	N	N		-	DCD_07.08-23	1	4
		775	07.08-23	11/29/2011	Y	N	N		-	DCD_07.08-23	1	4
		755	07.08-23	6/18/2013	Y	N	N		-	DCD_07.08-23	5	4
		775	07.08-24	9/13/2011	Y	N	N		-	DCD_07.08-24	1	4
		775	07.08-24	11/29/2011	Y	N	N		-	DCD_07.08-24	1	4
		755	07.08-24	6/18/2013	Y	N	N		-	DCD_07.08-24	5	4
		829	07.08-25	11/29/2011	Y	N	N		-	DCD_07.08-25	1	4
		988	07.08-26	6/13/2013	N	N	N		-	-	N/A	N/A
		988	07.08-27	6/13/2013	Y	Y	Y		-	-	N/A	N/A
		988	07.08-28	6/13/2013	N	N	N		-	-	N/A	N/A
		988	07.08-29	6/13/2013	N	N	N		-	-	N/A	N/A
		988	07.08-30	6/17/2013	Y	N	N		-	DCD_07.08-30	5	4
		1037	07.08-31	8/2/2013	N	N	N		-	-	N/A	N/A
		1037	07.08-32	8/2/2013	N	N	N		-	-	N/A	N/A
		1037	07.08-33	8/2/2013	Y	N	N		-	DCD_07.08-33	-	4
		1037	07.08-34	8/2/2013	N	N	N		-	-	N/A	N/A

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		1046	07.08-35	9/5/2013	N	N	N		-	-	N/A	N/A
		1046	07.08-36	9/5/2013	N	N	N		-	-	N/A	N/A

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
7.9	Data Communication Systems	277	07.09-8455	2009/3/31	N	N	N		-	-	N/A	N/A
		277	07.09-8456	2009/3/31	N	N	N		-	-	N/A	N/A
		277	07.09-8457	2009/3/31	N	N	N		-	-	N/A	N/A
		231	07.09-1	2009/4/28	Y	N	N		-	DCD_07.09-1	3	2
		231	07.09-2	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-3	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-4	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-5	2009/4/28	Y	N	N		-	DCD_07.09-5	3	2
		231	07.09-6	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-7	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-8	2009/4/28	Y	N	N		-	DCD_07.09-8	3	2
		231	07.09-9	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-10	2009/4/28	Y	N	N		-	DCD_07.09-10	3	2
		231	07.09-11	2009/4/28	Y	N	N		-	DCD_07.09-11	3	2
		231	07.09-12	2009/4/28	N	N	N		-	-	N/A	N/A
		231	07.09-12	5/31/2011	Y	N	N		-	DCD_07.09-12	0	4
		231	07.09-13	2009/4/28	Y	N	N		-	DCD_07.09-13	3	2
		231	07.09-14	2009/4/28	Y	N	N		-	DCD_07.09-14	3	2
		231	07.09-15	2009/4/28	Y	N	N		-	DCD_07.09-15	3	2
			07.09-16									
			07.09-17									
			07.09-18									
		701	07.09-19	2011/4/28	Y	N	N		-	DCD_07.09-19	0	4
		701	07.09-20	2011/4/28	Y	N	N		-	DCD_07.09-20	0	4
		701	07.09-21	2011/4/28	Y	N	N		-	DCD_07.09-20	0	4
		701	07.09-21	5/31/2011	Y	N	N		-	DCD_07.09-21	0	4
		701	07.09-22	2011/4/28	Y	N	N		-	DCD_07.09-20	0	4
		710	07.09-23	2011/4/28	N	N	N		-	-	N/A	N/A
		710	07.09-23	2011/6/20	N	N	N		-	-		
		710	07.09-23	2011/9/13	Y	Y	N		-	DCD_07.09-23	1	4
		710	07.09-23	11/1/2013	Y	N			-	DCD_07.09-23	0	
		778	07.09-24	2011/8/1	Y	N	N		-	DCD_7.09-24	1	4
		778	07.09-24	11/29/2012	Y	N	N		-	DCD_7.09-24	3	4
		779	07.09-25	11/29/2012	Y	N	N		-	DCD_7.09-25	3	4
		992	07.09-26	8/26/2013	N	N	N		-	-	N/A	N/A
		992	07.09-26	11/1/2013	Y	N	N		-	DCD_07.09-26 S01	0	
		1076	07.09-27	2014/2/25	Y	N	N		-	DCD_07.09-27	0	
7-8	Branch Technical Position -											
	Guidance for Application	830	07-08BTP-1	2011/11/29	N	N	N		-	-	N/A	N/A
	of Regulatory Guide 1.22	830	07-08BTP-2	2011/11/29	N	N	N		-	-	N/A	N/A
		830	07-08BTP-3	2011/11/29	N	N	N		-	-	N/A	N/A
		830	07-08BTP-4	2011/11/29	N	N	N		-	-	N/A	N/A
		830	07-08BTP-5	2011/11/29	N	N	N		-	-	N/A	N/A
7-14	Branch Technical Position -											
	Guidance on Software Reviews for	525	07-14BTP-30	2010/3/3	N	N	N		-	-	N/A	N/A
	Digital Computer Based Instrument	525	07-14BTP-31	2010/3/3	N	N	N		-	-	N/A	N/A
	and Control Systems	525	07-14BTP-32	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-33	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-34	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-35	2010/3/3	N	N	N		-	-	N/A	N/A

Chapter:7

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		525	07-14BTP-36	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-37	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-38	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-39	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-40	2010/3/3	N	N	N		-	-	N/A	N/A
		525	07-14BTP-41	2010/3/3	N	N	N		-	-	N/A	N/A
		665	07-14BTP-42	2010/12/22	N	N	N		-	-	N/A	N/A
		665	07-14BTP-42	2011/4/28	N	N	N		-	-	N/A	N/A
		772	07-14BTP-43	2011/8/1	N	N	N		-	-	N/A	N/A
		772	07-14BTP-44	2011/8/1	N	N	N		-	-	N/A	N/A
		833	07-14-BTP-45	2/27/2012	Y	N	N		-	DCD_07-14_BTP-45	2	4
		833	07-14-BTP-46	3/9/2012	N	N	N		-	-	N/A	N/A
		833	07-14BTP-47	2011/11/29	N	N	N		-	-	N/A	N/A
		833	07-14BTP-48	2011/11/29	N	N	N		-	-	N/A	N/A
		833	07-14-BTP-49	2/27/2012	N	N	N		-	-	N/A	N/A
		833	07-14BTP-50	2011/11/29	N	N	N		-	-	N/A	N/A
		833	07-14-BTP-51	2/27/2012	N	N	N		-	-	N/A	N/A
		833	07-14BTP-52	2011/11/29	N	N	N		-	-	N/A	N/A
		833	07-14BTP-53	xx/yy/2011								
		833	07-14BTP-54	2011/11/29	N	N	N		-	-	N/A	N/A
		833	07-14-BTP-55	2/27/2012	N	N	N		-	-	N/A	N/A
		993	07-14-BTP-56	10/9/2013	N	N	N		-	-	N/A	N/A
7-19	Branch Technical Position-	1041	07-19-BTP-1	8/19/2013	N	N	N		-	-	N/A	N/A
	Guidance for Evaluation of Diversit	1041	07-19-BTP-2	8/19/2013	N	N	N		-	-	N/A	N/A
	and Defense-in-Depth in Digital	1041	07-19-BTP-3	8/19/2013	N	N	N		-	-	N/A	N/A
	Computer-Based Instrumentation	1041	07-19-BTP-4	8/19/2013	N	N	N		-	-	N/A	N/A
	and Control Systems	1041	07-19-BTP-5	8/19/2013	N	N	N		-	-	N/A	N/A
7-21	Branch Technical Position -	593	07-21BTP-1	2010/7/16	N	N	N		-	-	N/A	N/A
	Guidance on Digital Computer	593	07-21BTP-1	2011/4/28	N	N	N		-	-	N/A	N/A
	Real-Time Performance	593	07-21BTP-2	2010/11/24	N	N	N		-	-	N/A	N/A
		593	07-21BTP-2	2011/4/28	N	N	N		-	-	N/A	N/A
		593	07-21BTP-3	2010/11/24	N	N	N		-	-	N/A	N/A
		593	07-21BTP-4	2010/11/24	Y	N	N		-	DCD_07-21BTP-5	6	3
		593	07-21BTP-4	2011/4/28	Y	N	N		-	DCD_07-21BTP-5	0	4
		593	07-21BTP-5	2010/11/24	N	N	N		-	-	N/A	N/A

Chapter:8

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
8.1	Electric Power - Introduction											
8.2	Offsite Power System	4	08.02-1	2008/5/30	Y	Y	N	fin.	-	DCD_08.02-1	-	1
		4	08.02-2	2008/5/30	N	Y	N	fin.	-	-	N/A	N/A
		4	08.02-3	2008/5/30	Y	Y	N	fin.	-	DCD_08.02-3	-	1
		4	08.02-4	2008/5/30	Y	N	N	fin.	-	DCD_08.02-4	-	1
		4	08.02-5	2008/5/30	N	N	N	fin.	-	-	N/A	N/A
		4	08.02-6	2008/5/30	Y	N	N	fin.	-	DCD_08.02-6	-	1
		4	08.02-7	2008/5/30	Y	Y	N	fin.	-	DCD_08.02-7	-	1
		4	08.02-8	2008/5/30	Y	N	N	fin.	-	DCD_08.02-8	-	1
		4	08.02-9	2008/5/30	N	N	N	fin.	-	-	N/A	N/A
		432	08.02-10	2009/9/18	Y	N	N		-	DCD_08.02-10	0	3
		432	08.02-11	2009/9/18	N	N	N		-	-	N/A	N/A
		432	08.02-12	2009/9/18	Y	N	N		-	DCD_08.02-12	0	3
		432	08.02-13	2009/9/18	Y	N	N		-	DCD_08.02-13	0	3
		432	08.02-14	2009/9/18	N	N	N		-	-	N/A	N/A
		432	08.02-15	2009/9/18	N	N	N		-	-	N/A	N/A
		432	08.02-16	2009/9/18	N	N	N		-	-	N/A	N/A
		1017	08.02-17	5/10/2013	N	N	N		-	-	N/A	N/A
		1017	08.02-17	12/18/2013	Y	Y	Y		-	DCD_08.02-17	0	
8.3.1	A-C Power Systems (Onsite)	5	08.03.01-1	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		5	08.03.01-2	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		5	08.03.01-3	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		5	08.03.01-4	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		5	08.03.01-5	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		5	08.03.01-6	2008/6/6	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-7	2008/7/18	Y	N	N	fin.	-	DCD_08.03.01-7	0	2
		10	08.03.01-7	2013/6/14	Y	N	N		-	DCD_08.03.01-7	5	4
		10	08.03.01-8	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-9	2008/7/18	Y	N	N	fin.	-	DCD_08.03.01-9	0	2
		10	08.03.01-10	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-11	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-12	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-13	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-14	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-15	2008/7/18	Y	N	N	fin.	-	DCD_08.03.01-15	0	2
		10	08.03.01-16	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-17	2008/7/18	Y	N	N	fin.	-	DCD_08.03.01-17	0	2
		10	08.03.01-18	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-19	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-20	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		10	08.03.01-21	2008/7/18	Y	N	N	fin.	-	DCD_08.03.01-21	0	2
		10	08.03.01-21	2011/11/9	Y	N	N		-	DCD_08.03.01-21	1	4
		10	08.03.01-22	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		386	08.03.01-23	2009/7/22	Y	N	N		-	DCD_08.03.01-23	4	2
		386	08.03.01-24	2009/7/22	Y	N	N		-	DCD_08.03.01-24	4	2
		386	08.03.01-25	2009/7/22	N	N	N		-	-	N/A	N/A
		386	08.03.01-26	2009/7/22	Y	N	N		-	DCD_08.03.01-26	4	2
		386	08.03.01-27	2009/7/22	Y	N	N		-	DCD_08.03.01-27	4	2
		386	08.03.01-28	2009/7/22	N	N	N		-	-	N/A	N/A
		386	08.03.01-29	2009/7/22	Y	N	N		-	DCD_08.03.01-29	4	2
		386	08.03.01-30	2009/7/22	Y	N	N		-	DCD_08.03.01-30	4	2
		386	08.03.01-31	2009/7/22	N	N	N		-	-	N/A	N/A
		386	08.03.01-32	2009/7/22	Y	N	N		-	DCD_08.03.01-32	4	2
		386	08.03.01-33	2009/7/22	Y	N	N		-	DCD_08.03.01-33	4	2
		394	08.03.01-34	2009/7/23	Y	N	N		-	DCD_08.03.01-34	4	2
		394	08.03.01-35	2009/7/23	N	N	N		-	-	N/A	N/A
		394	08.03.01-36	2009/7/23	N	N	N		-	-	N/A	N/A

Chapter:8

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		394	08.03.01-37	2009/7/23	N	N	N		-	-	N/A	N/A
		394	08.03.01-38	2009/7/23	N	N	N		-	-	N/A	N/A
		394	08.03.01-38	2011/11/22	Y	Y	N		-	DCD_08.03.01-38	1	4
		703	08.03.01-39	2011/3/31	N	N	N		-	-	N/A	N/A
		726	08.03.01-40	2011/6/13	N	N	N		-	-	N/A	N/A
		726	08.03.01-41	2011/6/13	N	N	N		-	-	N/A	N/A
		818	08.03.01-42	2011/10/7	N	N	N		-	-	N/A	N/A
		876	08.03.01-43	7/19/2012	Y	N	N		-	DCD_80.03.01-43	3	4
		876	08.03.01-44	7/19/2012	N	N	N		-	-	N/A	N/A
		876	08.03.01-45	7/19/2012	N	N	N		-	-	N/A	N/A
		962	08.03.01-46	10/15/2012	Y	N	N		-	DCD_08.03.01-46	3	4

Chapter:8

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
8.3.2	D-C Power Systems (Onsite)	3	01-1	2008/5/30	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-2	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-3	2008/7/10	Y	N	N	fin.	-	DCD_08.03.02-3	-	1
		8	08.03.02-4	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-5	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-6	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-7	2008/7/10	Y	N	N	fin.	-	DCD_08.03.02-7	-	1
		8	08.03.02-8	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-9	2008/7/10	Y	N	N	fin.	-	DCD_08.03.02-9	-	1
		8	08.03.02-10	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-11	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-12	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-13	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		8	08.03.02-14	2008/7/10	N	N	N	fin.	-	-	N/A	N/A
		388	08.03.02-15	2009/7/13	Y	N	N		-	DCD_08.03.02-15	4	2
		388	08.03.02-16	2009/7/13	Y	N	N		-	DCD_08.03.02-16	4	2
		388	08.03.02-17	2009/7/13	N	N	N		-	-	N/A	N/A
		388	08.03.02-18	2009/7/13	Y	N	N		-	DCD_08.03.02-18	4	2
		388	08.03.02-19	2009/7/13	Y	N	N		-	DCD_08.03.02-19	4	2
		388	08.03.02-20	2009/7/13	Y	N	N		-	DCD_08.03.02-20	4	2
		388	08.03.02-21	2009/7/13	Y	N	N		-	DCD_08.03.02-21	4	2
		388	08.03.02-22	2009/7/13	Y	N	N		-	DCD_08.03.02-22	4	2
		388	08.03.02-22	11/22/2011	Y	N	N		-	DCD_08.03.02-22	1	4
		388	08.03.02-22	2/15/2012	Y	N	N		-	DCD_08.03.02-22	-	4
		388	08.03.02-22	4/20/2012	Y	N	N		-	DCD_08.03.02-22	-	4
8.4	Station Blackout	11	08.04-1	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-2	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-3	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-4	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-5	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-6	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		11	08.04-7	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		419	08.04.-8	2009/8/20	Y	N	N		-	DCD_08.04-8	-	2
		419	08.04.-9	2009/8/20	Y	Y	N		-	DCD_08.04-9	-	2
		419	08.04.-10	2009/8/20	Y	N	N		-	DCD_08.04-10	-	2
		419	08.04.-11	2009/8/20	Y	N	N		-	DCD_08.04-11	-	2
		419	08.04.-12	2009/8/20	Y	N	N		-	DCD_08.04-12	-	2
				11/22/2011	Y	N	N		-	DCD_08.04-12	1	4
		510	08.04-13	2010/1/18	N	N	N		-	-	N/A	N/A
		683	08.04-14	XX/YY/2011								
		875	08.04-15	1/27/2012	Y	N	N		-	DCD_08.04-15	2	4
		875	08.04-15	5/15/2012	Y	N	N		-	DCD_08.04-15	-	4
		938	08.04/16	12/20/2012	N	N	N		-	-	N/A	N/A
		991	08.04-17	4/5/2013	N	N	N		-	-	N/A	N/A

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.1.1	Criticality Safety of Fresh and	155	09.01.01.-1	2009/2/10	N	N	N		-	-	N/A	N/A
	Spent Fuel Storage and Handling	155	09.01.01-2	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-3	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-4	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-5	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-6	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-7	2009/2/10	N	N	N		-	-	N/A	N/A
		155	09.01.01-8	2009/2/10	N	N	N		-	-	N/A	N/A
		247	09.01.01-9	2009/3/30	Y	N	N		-	DCD_09.01.01-9	-	2
		247	09.01.01-10	2009/3/30	Y	Y	N		-	DCD_09.01.01-10	-	2
		382	09.01.01-11	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-12	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-13	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-14	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-15	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-16	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-17	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-18	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-19	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-20	2009/7/7	N	N	N		-	-	N/A	N/A
		382	09.01.01-21	2009/7/7	N	N	N		-	-	N/A	N/A
		647	09.01.01-22	2010/11/11	N	N	N		-	-	N/A	N/A
			09.01.01-22	2011/3/23	N	N	N		-	-	N/A	N/A
		647	09.01.01-23	2010/11/11	N	N	N		-	-	N/A	N/A
			09.01.01-23	2011/3/23	N	N	N		-	-	N/A	N/A
9.1.2	New and Spent Fuel Storage	132	09.01.02-01	2009/1/29	Y	N	N		-	DCD_09.01.02-01	2	2
		132	09.01.02-02	2009/1/29	N	N	N		-	-	N/A	N/A
		132	09.01.02-03	2009/1/29	N	N	N		-	-	N/A	N/A
		132	09.01.02-04	2009/1/29	Y	N	N		-	DCD_09.01.02-04	1	2
		132	09.01.02-05	2009/1/29	Y	N	N		-	DCD_09.01.02-05	1	2
		132	09.01.02-06	2009/1/29	N	N	N		-	-	N/A	N/A
		132	09.01.02-07	2009/1/29	Y	N	N		-	DCD_09.01.02-07	-	2
		132	09.01.02-08	2009/1/29	Y	N	N		-	DCD_09.01.02-08	2	2
		132	09.01.02-09	2009/1/29	Y	N	N		-	DCD_09.01.02-09	2	2
		132	09.01.02-10	2009/1/29	N	N	N		-	-	N/A	N/A
		132	09.01.02-11	2009/1/29	Y	N	N		-	DCD_09.01.02-11	1	2
		132	09.01.02-11	2011/6/7	N	N	N		-	-	N/A	N/A
		132	09.01.02-12	2009/1/29	N	N	N		-	-	N/A	N/A
		132	09.01.02-13	2009/1/29	Y	N	N		-	DCD_09.01.02-13	1	2
		132	09.01.02-14	2009/1/29	Y	N	N		-	DCD_09.01.02-14	1	2
		132	09.01.02-14	2011/6/7	N	N	N		-	-	N/A	N/A
		132	09.01.02-15	2009/1/29	Y	N	N		-	DCD_09.01.02-15	-	2
		132	09.01.02-16	2009/1/29	Y	N	N		-	DCD_09.01.02-16	-	2
		132	09.01.02-17	2009/1/29	Y	N	N		-	DCD_09.01.02-17	-	2
		248	09.01.02-18	2009/3/30	Y	N	N		-	DCD_09.01.02-18	2	2
		248	09.01.02-19	2009/3/30	Y	N	N		-	DCD_09.01.02-19	2	2
		248	09.01.02-20	2009/3/30	N	N	N		-	-	N/A	N/A
		387	09.01.02-21	2009/7/10	Y	Y	N		-	DCD_09.01.02-21	-	2
		387	09.01.02-22	2009/7/10	Y	N	N		-	DCD_09.01.02-22	3	2
		387	09.01.02-23	2009/8/11	Y	N	N		-	DCD_09.01.02-23	-	2
		389	09.01.02-24	2009/7/14	Y	N	N		-	DCD_09.01.02-24	-	2
		806	09.01.02-25	2011/9/2	Y	N	N		-	DCD_09.01.02-25	1	4
		906	09.01.02-26	04/27/2012	Y	N	N		-	-	N/A	N/A
		906	09.01.02-26	05/23/2013	Y	N	N		-	DCD_09.01.02-26	5	4
		973	09.01.02-27	11/29/2012	Y	N	N		-	DCD_09.01.02-27	3	4
		1032	09.01.02-28	6/27/2013	N	N	N		-	-	N/A	N/A
		1054	09.01.02-40	11/06/2013	N	N	N		-	DCD_09.01.02-40	N/A	N/A
		1054	09.01.02-41	11/06/2013	N	N	N		-	DCD_09.01.02-41	N/A	N/A
		1054	09.01.02-42	11/06/2013	N	N	N		-	DCD_09.01.02-42	N/A	N/A

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		1054	09.01.02-43	11/06/2013	N	N	N		-	DCD_09.01.02-43	N/A	N/A
		1055	09.01.02-44	11/14/2013	Y	N	N		-	DCD_09.01.02-44	0	
		1055	09.01.02-45	11/14/2013	Y	N			-	DCD_09.01.02-45	0	
		1055	09.01.02-46	11/14/2013	Y	N			-	DCD_09.01.02-46	0	
		1055	09.01.02-47	11/14/2013	Y	N			-	DCD_09.01.02-47	0	
		1055	09.01.02-48	11/14/2013	N	N			-	-	N/A	N/A
		1055	09.01.02-49	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-50	12/2/2013	Y	N	N			DCD_09.01.02-53	0	
		1055	09.01.02-51	12/2/2013	Y	N	N			DCD_09.01.02-51	0	
		1055	09.01.02-52	12/2/2013	Y	N	N			DCD_09.01.02-52	0	
		1055	09.01.02-53	12/2/2013	Y	Y	N			DCD_09.01.02-53	0	
		1055	09.01.02-54	11/14/2013	Y	N	N			DCD_09.01.02-54	0	
		1055	09.01.02-55	11/14/2013	Y	N	N			DCD_09.01.02-55	0	
		1055	09.01.02-56	12/2/2013	Y	N	N			DCD_09.01.02-56	0	
		1055	09.01.02-57	11/14/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-58	11/14/2013	Y	N	N			DCD_09.01.02-58	0	
		1055	09.01.02-59	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-60	12/2/2013	Y	N	N			DCD_09.01.02-53	0	
		1055	09.01.02-61	12/2/2013	Y	N	N			DCD_09.01.02-53	0	
		1055	09.01.02-62	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-63	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-64	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-65	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-66	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-67	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-68	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-69	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-70	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-71	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-72	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-73	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-74	11/14/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-75	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-76	12/2/2013	N	N	N			-	N/A	N/A
		1055	09.01.02-77	12/2/2013	N	N	N			-	N/A	N/A
9.1.3	Spent Fuel Pool Cooling and	131	09.01.03-01	2009/1/29	Y	N	N		-	DCD_09.01.03-01	1	2
	Cleanup System	131	09.01.03-02	2009/1/29	Y	N	N		-	DCD_09.01.03-02	1	2
		131	09.01.03-03	2009/1/29	Y	N	N		-	DCD_09.01.03-03	1	2
		201	09.01.03-04	2009/3/26	N	N	N		-	-	N/A	N/A
		201	09.01.03-05	2009/3/26	Y	N	N		-	DCD_09.01.03-05	2	2
		360	09.01.03-6	2009/5/27	Y	N	N		-	DCD_09.01.03-6	-	2
		735	09.01.03-7	2011/6/22	Y	N	N		-	DCD_09.01.03-7	0	4
		735	09.01.03-7	10/31/2012	Y	N	N		-	DCD_09.01.03-7	3	4
		756	09.01.03-8	8/10/2011	Y	N	N		-	DCD_09.01.03-8	1	4
		763	09.01.03-9	8/23/2011	Y	N	N		-	DCD_09.01.03-8	1	4

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.1.4	Light Load Handling System	200	09.01.04-01	2009/4/23	Y	N	N		-	DCD_09.01.04-01	3	2
	(Related to Refueling)	200	09.01.04-02	2009/4/23	Y	N	N		-	DCD_09.01.04-02	3	2
		200	09.01.04-03	2009/4/23	Y	N	N		-	DCD_09.01.04-03	3	2
		200	09.01.04-04	2009/4/23	Y	N	N		-	DCD_09.01.04-04	3	2
		200	09.01.04-05	2009/4/23	Y	N	N		-	DCD_09.01.04-05	3	2
		200	09.01.04-06	2009/4/23	Y	N	N		-	DCD_09.01.04-06	3	2
		200	09.01.04-07	2009/4/23	N	N	N		-	-	N/A	N/A
		200	09.01.04-08	2009/4/23	Y	N	N		-	DCD_09.01.04-08	3	2
		200	09.01.04-09	2009/4/23	Y	N	N		-	DCD_09.01.04-09	3	2
		200	09.01.04-10	2009/4/23	N	N	N		-	-	N/A	N/A
		200	09.01.04-11	2009/4/23	Y	N	N		-	DCD_09.01.04-11	3	2
		200	09.01.04-12	2009/4/23	Y	N	N		-	DCD_09.01.04-12	3	2
		200	09.01.04-13	2009/4/23	Y	N	N		-	DCD_09.01.04-13	-	2
		200	09.01.04-14	2009/4/23	N	N	N		-	-	N/A	N/A
		200	09.01.04-15	2009/4/23	N	N	N		-	-	N/A	N/A
		507	09.01.04-16	2010/2/15	Y	N	N		-	DCD_09.01.04-16	2	3
		555	09.01.04-17	2010/6/4	Y	N	N		-			
		555	09.01.04-17	2010/6/16	Y	N	N		-	DCD_09.01.04-17	4	3
		555	09.01.04-18	2010/6/4	Y	N	N		-			
		555	09.01.04-18	2010/6/16	Y	N	N		-	DCD_09.01.04-18	4	3
		555	09.01.04-19	2010/6/4	Y	N	N		-			
		555	09.01.04-19	2010/6/16	Y	N	N		-	DCD_09.01.04-19	4	3
		555	09.01.04-20	2010/6/4	Y	N	N		-			
		555	09.01.04-20	2010/6/16	Y	N	N		-	DCD_09.01.04-20	4	3
		633	09.01.04-21	2010/10/21	Y	N	N		-	DCD_09.01.04-21	5	3
		721	09.01.04-22	2011/4/20	Y	N	N		-	DCD_09.01.04-22	0	4
		887	09.01.04-23	02/08/2012	N	N	N		-	-	N/A	N/A
9.1.5	Overhead Heavy Load	292	9.1.5-01	2009/5/25	Y	N	N		-	DCD_9.1.5-01	3	2
	Handling Systems	292	9.1.5-02	2009/5/25	Y	N	N		-	DCD_9.1.5-02	3	2
		292	9.1.5-03	2009/5/25	Y	N	N		-	DCD_9.1.5-03	3	2
		292	9.1.5-04	2009/5/25	Y	N	N		-	DCD_9.1.5-04	3	2
		292	9.1.5-05	2009/5/25	N	N	N		-	-	N/A	N/A
		292	9.1.5-06	2009/5/25	Y	N	N		-	DCD_9.1.5-06	3	2
		292	9.1.5-07	2009/5/25	Y	N	N		-	DCD_9.1.5-07	4	2
		292	9.1.5-08	2009/5/25	Y	N	N		-	DCD_9.1.5-08	3	2
		292	9.1.5-09	2009/5/25	Y	N	N		-	DCD_9.1.5-09	3	2
		292	9.1.5-10	2009/5/25	Y	N	N		-	DCD_9.1.5-10	-	2
		292	9.1.5-11	2009/5/25	Y	N	N		-	DCD_9.1.5-11	3	2
		292	9.1.5-12	2009/5/25	Y	Y	N		-	DCD_9.1.5-12	3	2
		292	9.1.5-13	2009/5/25	N	N	N		-	-	N/A	N/A
		563	09.01.05-14	2010/6/15	Y	N	N		-	DCD_09.01.05-14	4	3
		563	09.01.05-15	2010/6/15	Y	N	N		-	DCD_09.01.05-15	4	3
		563	09.01.05-16	2010/6/15	Y	N	N		-	DCD_09.01.05-16	4	3
		563	09.01.05-17	2010/6/15	Y	N	N		-	DCD_09.01.05-17	4	3
		616	09.01.05-18	2010/9/22	Y	N	N		-	DCD_09.01.05-18	5	3
		616	09.01.05-18	2011/6/7	Y	N	N		-		0	4
		616	09.01.05-18	05/29/2012	Y	N	N		-	DCD_09.01.05-18	3	4
		616	09.01.05-19	2010/9/22	N	N	N		-	-	N/A	N/A

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.2.1	Station Service Water System	203	09.02.01-1	2009/3/25	N	N	N		-	-	N/A	N/A
		203	09.02.01-2	2009/3/25	Y	N	N		-	DCD_09.02.01-2	-	2
		326	09.02.01-3	2009/6/19	Y	N	N		-	DCD_09.02.01-3	-	2
		326	09.02.01-4	2009/6/19	Y	Y	N		-	DCD_09.02.01-4	3	2
		326	09.02.01-5	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-6	2009/6/19	Y	N	N		-	DCD_09.02.01-6	3	2
		326	09.02.01-7	2009/6/19	Y	N	N		-	DCD_09.02.01-7	3	2
		326	09.02.01-8	2009/6/19	Y	N	N		-	DCD_09.02.01-8	3	2
		326	09.02.01-9	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-10	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-11	2009/6/19	Y	N	N		-	DCD_09.02.01-11	3	2
		326	09.02.01-12	2009/6/19	Y	Y	N		-	DCD_09.02.01-12	3	2
		326	09.02.01-13	2009/6/19	Y	Y	N		-	DCD_09.02.01-13	3	2
		326	09.02.01-14	2009/6/19	Y	Y	N		-	DCD_09.02.01-14	3	2
		326	09.02.01-15	2009/6/19	Y	N	N		-	DCD_09.02.01-15	3	2
		326	09.02.01-16	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-17	2009/6/19	Y	Y	N		-	DCD_09.02.01-17	3	2
		326	09.02.01-18	2009/6/19	Y	N	N		-	DCD_09.02.01-18	3	2
		326	09.02.01-19	2009/6/19	Y	N	N		-	DCD_09.02.01-19	3	2
		326	09.02.01-20	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-21	2009/6/19	Y	N	N		-	DCD_09.02.01-21	3	2
		326	09.02.01-22	2009/6/19	Y	N	N		-	DCD_09.02.01-22	3	2
		326	09.02.01-23	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-24	2009/6/19	N	N	N		-	-	N/A	N/A
		326	09.02.01-25	2009/6/19	Y	N	N		-	DCD_09.02.01-25	3	2
		326	09.02.01-26	2009/6/19	Y	N	N		-	DCD_09.02.01-26	-	2
		326	09.02.01-27	2009/6/19	Y	Y	N		-	DCD_09.02.01-27	3	2
		326	09.02.01-28	2009/6/19	Y	N	N		-	DCD_09.02.01-28	3	2
		1032	09.01.02-28	6/27/2013	N	N	N		-	-	N/A	N/A
		326	09.02.01-29	2009/6/19	Y	N	N		-	DCD_09.02.01-29	-	2
		326	09.02.01-29	6/27/2013	N	N	N		-	-	N/A	N/A
		326	09.02.01-30	2009/6/19	Y	Y	N		-	DCD_09.02.01-30	3	2
		326	09.02.01-30	6/27/2013	N	N	N		-	-	N/A	N/A
		361	09.02.01-31	2009/6/19	Y	Y	N		-	DCD_09.02.01-31	3	2
		361	09.02.01-31	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-32	2010/9/24	Y	Y	N		-	DCD_09.02.01-32	6	3
		585	09.02.01-32	2011/7/27	Y	Y	N		-	DCD_09.02.01-32	0	4
		585	09.02.01-32	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-33	2010/9/24	Y	Y	N		-	DCD_09.02.01-33	6	3
		585	09.02.01-33	2011/7/27	Y	Y	N		-	DCD_09.02.01-33	0	4
		585	09.02.01-33	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-34	2010/9/24	Y	Y	N		-	DCD_09.02.01-34	6	3
		585	09.02.01-34	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-35	2010/9/24	Y	Y	N		-	DCD_09.02.01-35	6	3
		585	09.02.01-35	2011/7/27	Y	Y	N		-	DCD_09.02.01-35	0	4
		585	09.02.01-35	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-36	2010/9/24	Y	Y	N		-	DCD_09.02.01-36	6	3
		585	09.02.01-36	2011/7/27	N	Y	N		-	DCD_09.02.01-36	N/A	N/A
		585	09.02.01-36	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-37	2010/9/24	Y	Y	N		-	DCD_09.02.01-37	6	3
		585	09.02.01-37	2011/7/27	N	Y	N		-	-	N/A	N/A
		585	09.02.01-37	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-38	2010/9/24	Y	Y	N		-	DCD_09.02.01-38	6	3
		585	09.02.01-38	2011/7/27	Y	Y	N		-	DCD_09.02.01-38	0	4
		585	09.02.01-38	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-39	2010/9/24	Y	Y	N		-	DCD_09.02.01-39	6	3
		585	09.02.01-39	6/27/2013	N	N	N		-	-	N/A	N/A
		585	09.02.01-40	2010/9/24	Y	N	N		-	DCD_09.02.01-40	6	3
		585	09.02.01-40	2011/7/27	Y	Y	N		-	DCD_09.02.01-40	0	4
		585	09.02.01-41	2010/9/24	Y	Y	N		-	DCD_09.02.01-41	6	3
		585	09.02.01-41	2011/7/27	Y	Y	N		-	DCD_09.02.01-41	0	4
		585	09.02.01-42	2010/9/24	Y	N	N		-	DCD_09.02.01-42	6	3

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		585	09.02.01-43	2010/9/24	Y	Y	N		-	DCD_09.02.01-43	6	3
		585	09.02.01-43	2011/7/27	Y	Y	N		-	DCD_09.02.01-43	0	4
		585	09.02.01-44	2010/9/24	Y	N	N		-	DCD_09.02.01-44	6	3
		585	09.02.01-44	2011/7/27	Y	N	N		-	DCD_09.02.01-44	0	4
		585	09.02.01-45	2010/9/24	Y	Y	N		-	DCD_09.02.01-45	6	3
		585	09.02.01-46	2010/9/24	Y	Y	N		-	DCD_09.02.01-46	6	3
		585	09.02.01-47	2010/9/24	N	N	N		-	-	N/A	N/A
		585	09.02.01-48	2010/9/24	N	N	N		-	-	N/A	N/A
		585	09.02.01-49	2010/9/24	Y	Y	N		-	DCD_09.02.01-49	6	3
		585	09.02.01-49	2011/7/27	Y	Y	N		-	DCD_09.02.01-49	0	4
		585	09.02.01-49	11/30/2012	Y	Y	Y		-	DCD_09.02.01-49	3	4
		585	09.02.01-50	2010/9/24	N	N	N		-	-	N/A	
		585	09.02.01-51	2010/9/24	Y	Y	N		-	DCD_09.02.01-51	6	3
		585	09.02.01-52	2010/9/24	Y	Y	N		-	DCD_09.02.01-52	6	3
		585	09.02.01-52	2011/7/27	Y	Y	N		-	DCD_09.02.01-52	0	4
		585	09.02.01-53	2010/9/24	N	N	N		-	-	N/A	N/A
		585	09.02.01-54	2010/9/24	N	N	N		-	-	N/A	N/A
		585	09.02.01-55	2010/9/24	Y	Y	N		-	DCD_09.02.01-55	6	3
		585	09.02.01-56	2010/9/24	N	N	N		-	-	N/A	N/A
		585	09.02.01-57	2010/9/24	Y	Y	N		-	DCD_09.02.01-57	6	3
		585	09.02.01-58	2010/9/24	Y	Y	N		-	DCD_09.02.01-58	6	3
		585	09.02.01-59	2010/9/24	Y	Y	N		-	DCD_09.02.01-59	6	3
		915	09.02.01-60	7/9/2012	N	N	N		-	-	N/A	N/A
		987	09.02.01-61	3/18/2013	N	N	N		-	-	N/A	N/A
9.2.2	Reactor Auxiliary	252	09.02.02-1	2009/3/30	N	N	N		-	-	N/A	N/A
	Cooling Water Systems	252	09.02.02-2	2009/3/30	Y	N	N		-	DCD_09.02.02-2	-	2
		343	09.02.02-3	2009/7/17	Y	N	N		-	DCD_09.02.02-3	-	2
		343	09.02.02-4	2009/7/17	Y	N	N		-			
		343	09.02.02-4	2009/7/31	Y	N	N			DCD_09.02.02-4	-	2
		343	09.02.02-5	2009/7/17	Y	N	N		-	DCD_09.02.02-5	-	2
		343	09.02.02-6	2009/7/17	Y	N	N		-	DCD_09.02.02-6	-	2
		343	09.02.02-7	2009/7/17	Y	N	N		-	DCD_09.02.02-7	-	2
		343	09.02.02-8	2009/7/17	Y	N	N		-	DCD_09.02.02-8	-	2
		343	09.02.02-9	2009/7/17	Y	N	N		-	DCD_09.02.02-9	-	2
		343	09.02.02-10	2009/7/17	Y	N	N		-	DCD_09.02.02-10	-	2
		343	09.02.02-11	2009/7/17	Y	Y	N		-	DCD_09.02.02-11	-	2
		343	09.02.02-12	2009/7/17	Y	N	N		-	DCD_09.02.02-12	-	2
		343	09.02.02-13	2009/7/17	Y	N	N		-	DCD_09.02.02-13	-	2
		343	09.02.02-14	2009/7/17	N	N	N		-	-	N/A	N/A
		343	09.02.02-15	2009/7/17	Y	N	N		-	DCD_09.02.02-15	-	2
		343	09.02.02-16	2009/7/17	N	N	N		-	-	N/A	N/A
		343	09.02.02-17	2009/7/17	N	N	N		-	-	N/A	N/A
		343	09.02.02-18	2009/7/17	Y	N	N		-	DCD_09.02.02-18	-	2
		343	09.02.02-19	2009/7/17	Y	N	N		-	DCD_09.02.02-19	-	2
		343	09.02.02-20	2009/7/17	Y	N	N		-	DCD_09.02.02-20	-	2
		343	09.02.02-21	2009/7/17	Y	N	N		-	DCD_09.02.02-21	-	2
		362	09.02.02-22	2009/6/19	N	N	N		-	-	N/A	N/A
		362	09.02.02-23	2009/6/19	Y	N	N		-	DCD_09.02.02-23	3	2
		362	09.02.02-24	2009/6/19	Y	N	N		-	DCD_09.02.02-24	3	2
		362	09.02.02-25	2009/6/19	Y	N	N		-	DCD_09.02.02-25	3	2
		362	09.02.02-26	2009/7/16	Y	Y	N		-	DCD_09.02.02-26	3	2
		362	09.02.02-27	2009/7/16	Y	N	N		-	DCD_09.02.02-27	-	2
		362	09.02.02-28	2009/7/16	Y	N	N		-	DCD_09.02.02-28	3	2
		362	09.02.02-29	2009/6/19	Y	N	N		-	DCD_09.02.02-29	3	2
		362	09.02.02-30	2009/6/19	Y	N	N		-	DCD_09.02.02-30	3	2
		362	09.02.02-31	2009/7/16	Y	N	N		-	DCD_09.02.02-31	3	2
		362	09.02.02-32	2009/6/19	Y	N	N		-	DCD_09.02.02-32	-	2

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		362	09.02.02-33	2009/7/16	Y	N	N		-	DCD_09.02.02-33	3	2
		362	09.02.02-34	2009/6/19	Y	N	N		-	DCD_09.02.02-34	3	2
		362	09.02.02-35	2009/6/19	N	N	N		-	-	N/A	N/A
		362	09.02.02-36	2009/6/19	Y	N	N		-	DCD_09.02.02-36	3	2
		362	09.02.02-37	2009/7/16	Y	Y	N		-	DCD_09.02.02-37	3	2
		362	09.02.02-38	2009/7/16	N	N	N		-	-	N/A	N/A
		362	09.02.02-39	2009/6/19	Y	N	N		-	DCD_09.02.02-39	3	2
		362	09.02.02-40	2009/6/19	N	N	N		-	-	N/A	N/A
		362	09.02.02-41	2009/6/19	N	N	N		-	-	N/A	N/A
		362	09.02.02-42	2009/6/19	N	N	N		-	-	N/A	N/A
		362	09.02.02-43	2009/6/19	Y	N	N		-	DCD_09.02.02-43	4	2
		362	09.02.02-44	2009/7/16	Y	N	N		-	DCD_09.02.02-44	3	2
		362	09.02.02-45	2009/6/19	Y	N	N		-	DCD_09.02.02-45	4	2
		567	09.02.02-46	2010/5/7	Y	N	N		-	DCD_09.02.02-46	3	3
		571	09.02.02-47	2010/6/8	N	N	N		-	-	N/A	N/A
		571	09.02.02-48	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-48	2011/7/29	Y	N	Y		-	DCD_09.02.02-48	1	4
		571	09.02.02-48	2011/10/27	Y	N	N		-	DCD_09.02.02-48	1	4
		571	09.02.02-49	2010/6/8	N	N	N		-	-	N/A	N/A
		571	09.02.02-49	2011/7/29	Y	N	N		-	DCD_09.02.02-49	0	4
		571	09.02.02-49	2011/10/27	Y	N	N		-	DCD_09.02.02-49	1	4
		571	09.02.02-50	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-50	2011/7/29	Y	N	N		-	DCD_09.02.02-50	0	4
		571	09.02.02-51	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-51	2011/7/29	Y	N	N		-	DCD_09.02.02-51	0	4
		571	09.02.02-52	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-52	2011/7/29	Y	N	N		-	DCD_09.02.02-52	0	4
		571	09.02.02-52	2012/12/19	Y	N	N		-	DCD_09.02.02-52	3	4
		571	09.02.02-53	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-53	2011/7/29	Y	N	N		-	DCD_09.02.02-53	0	4
		571	09.02.02-54	2010/6/8	N	N	N		-	-	N/A	N/A
		571	09.02.02-54	2011/7/29	Y	N	N		-	DCD_09.02.02-54	0	4
		571	09.02.02-55	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-55	2011/7/29	Y	N	N			DCD_09.02.02-55	0	4
		571	09.02.02-56	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-56	2011/7/29	Y	N	N			DCD_09.02.02-56	0	4
		571	09.02.02-57	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-57	2011/7/29	Y	N	N		-	DCD_09.02.02-57	0	4
		571	09.02.02-57	12/19/2012	Y	N	N		-	DCD_09.02.02-57	3	4
		571	09.02.02-58	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-58	2011/7/29	Y	N	N		-	DCD_09.02.02-58	0	4
		571	09.02.02-58	7/20/2012	Y	N	N		-	DCD_09.02.02-58	-	4
		571	09.02.02-59	2010/6/8	Y	N	N		-	-	N/A	N/A
		571	09.02.02-59	2011/7/29	Y	N	N		-	DCD_09.02.02-59	0	4
		571	09.02.02-60	2010/6/8	N	N	N		-	-	N/A	N/A
		571	09.02.02-60	2011/7/29	Y	N	N		-	DCD_09.02.02-60	0	4
		571	09.02.02-61	2010/6/8	N	N	N		-	-	N/A	N/A
		571	09.02.02-61	2011/10/27	N	N	N		-	-	N/A	N/A
		571	09.02.02-62	2010/6/8	Y	N	N		-	DCD_09.02.02-62	1	4
		571	09.02.02-63	2010/6/8	Y	N	N		-	DCD_09.02.02-63	-	3
		571	09.02.02-64	2010/6/8	Y	N	N		-	DCD_09.02.02-64	1	4
		571	09.02.02-65	2010/6/8	Y	N	N		-	DCD_09.02.02-65	1	4
		571	09.02.02-66	2010/6/8	Y	N	N		-	DCD_09.02.02-66	1	4
		571	09.02.02-67	2010/6/8	Y	N	N		-	DCD_09.02.02-67	0	4
		571	09.02.02-67	2011/7/29	Y	N	N		-	DCD_09.02.02-67	0	4
		571	09.02.02-68	2010/6/8	Y	N	N		-	DCD_09.02.02-68	0	4
		571	09.02.02-68	2011/7/29	Y	N	N		-	DCD_09.02.02-68	0	4

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		571	09.02.02-68	2011/10/27	Y	N	N		-	DCD_09.02.02-68	1	4
		576	09.02.02-69	2010/6/8	N	N	N		-	-	N/A	N/A
		576	09.02.02-69	2011/7/29	Y	N	N		-	DCD_09.02.02-69	0	4
		584	09.02.02-70	2010/6/10	Y	N	N		-	DCD_09.02.02-70	0	4
		584	09.02.02-70	2011/7/15	Y	N	N		-	DCD_09.02.02-70	0	4
		584	09.02.02-71	2010/6/10	Y	N	N		-	DCD_09.02.02-71	0	4
		584	09.02.02-71	2011/7/15	Y	N	N		-	DCD_09.02.02-71	0	4
		584	09.02.02-72	2010/6/10	Y	N	N		-	DCD_09.02.02-72	0	4
		584	09.02.02-72	2011/7/15	Y	N	N		-	DCD_09.02.02-72	0	4
		584	09.02.02-72	11/19/2012	Y	N	N		-	DCD_09.02.02-72	3	4
		584	09.02.02-73	2010/6/10	N	N	N		-	-	N/A	N/A
		584	09.02.02-73	2011/7/15	Y	N	N		-	DCD_09.02.02-73	0	4
		584	09.02.02-74	2010/6/10	N	N	N		-	-	N/A	N/A
		584	09.02.02-74	2011/7/15	Y	N	N		-	DCD\09.02.02-74	0	4
		584	09.02.02-75	2010/6/10	N	N	N		-	-	N/A	N/A
		584	09.02.02-76	2010/6/10	Y	N	N		-	DCD_09.02.02-76	0	4
		584	09.02.02-76	2011/7/15	Y	N	N		-	DCD_09.02.02-76	0	4
		584	09.02.02-77	2010/6/10	Y	N	N		-	DCD_09.02.02-77	0	4
		584	09.02.02-77	2010/6/10	Y					DCD_09.02.02-77	0	4
		584	09.02.02-77	2010/6/10	Y					DCD_09.02.02-77	0	4
		584	09.02.02-77	2010/6/10	Y					DCD_09.02.02-77	0	4
		584	09.02.02-77	2010/6/10	Y					DCD_09.02.02-77	0	4
		584	09.02.02-77	2010/6/10	Y					DCD_09.02.02-77	0	4
		584	09.02.02-77	2011/7/15	Y	N	N	N	-	DCD_09.02.02-77	0	4
		584	09.02.02-78	2010/6/10	Y	N	N		-	DCD_09.02.02-78	0	4
		584	09.02.02-78	2010/6/10	Y					DCD_09.02.02-78	0	4
		584	09.02.02-78	2010/6/10	Y					DCD_09.02.02-78	0	4
		584	09.02.02-78	2010/6/10	Y					DCD_09.02.02-78	0	4
		584	09.02.02-78	2010/6/10	Y					DCD_09.02.02-78	0	4
		584	09.02.02-78	2010/6/10	Y					DCD_09.02.02-78	0	4
		584	09.02.02-78	2011/7/15	Y	N	N	N	-	DCD_09.02.02-78	0	4
		584	09.02.02-79	2010/6/10	N	N	N		-	-	N/A	N/A
		584	09.02.02-79	2011/7/15	Y	N	N		-	DCD_09.02.02-79	0	4
		697	09.02.02-80	2011/5/12	Y	N	N		-	DCD_09.02.02-80	0	4
		697	09.02.02-80	2011/7/29	Y	N	N		-	DCD_09.02.02-80	1	4
		699	09.02.02-81	2011/6/6	Y	N	N		-	DCD_09.02.02-81	0	4
		699	09.02.02-81	2011/7/29	Y	N	N		-	DCD_09.02.02-81	0	4
		760	09.02.02-82	2/15/2012	Y	N	N		-	DCD_09.02.02-82	2	4
		760	09.02.02-82	4/19/2013	Y	N	N		-	DCD_09.02.02-82	4	4
		765	09.02.02-83	2011/6/27	N	N	N		-	-	N/A	N/A
		774	09.02.02-84	2011/8/12	Y	N	N			-	1	4
		878	09.02.02-85	2012/3/2	Y	N	N		-	DCD_09.02.02-85	2	4
		919	09.02.02-86	7/25/2012	Y	N	N		-	DCD_09.02.02-86	3	4
		919	09.02.02-86	6/13/2013	Y	Y	Y		-	DCD_09.02.02-86	5	4
		986	09.02.02-87	4/25/2013	Y	Y	N			DCD_09.02.02-87	4	4

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.2.4	Potable and Sanitary Water System	125	09.02.04-1	2009/1/20	Y	Y	N		-	DCD_09.02.04-1	1	2
		125	09.02.04-2	2009/1/20	Y	Y	N		-	DCD_09.02.04-2	1	2
		125	09.02.04-3	2009/1/20	Y	N	N		-	DCD_09.02.04-3	1	2
9.2.5	Ultimate Heat Sink	286	09.02.05-1	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-1	2010/7/7	Y	N	N		-	DCD_09.02.05-1	4	3
		286	09.02.05-2	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-2	2010/7/7	Y	N	N		-	DCD_09.02.05-2	4	3
		286	09.02.05-2	2011/7/25	Y	N	N		-	DCD_09.02.05-2	0	4
		286	09.02.05-3	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-3	2010/7/7	Y	N	N		-	DCD_09.02.05-3	4	3
		286	09.02.05-4	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-4	2010/7/7	Y	N	N		-	DCD_09.02.05-4	4	3
		286	09.02.05-5	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-5	2010/7/7	N	N	N		-	-	N/A	N/A
		286	09.02.05-6	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-6	2010/7/7	Y	N	N		-	DCD_09.02.05-6	4	3
		286	09.02.05-7	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-7	2010/7/7	Y	N	N		-	DCD_09.02.05-7	4	3
		286	09.02.05-8	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-8	2010/7/7	Y	N	N		-	DCD_09.02.05-8	4	3
		286	09.02.05-8	2011/7/25	Y	N	N		-	DCD_09.02.05-8	0	4
		286	09.02.05-9	2009/5/12	N	N	N		-	-	N/A	N/A
		286	09.02.05-9	2010/7/7	Y	N	N		-	DCD_09.02.05-9	4	3
		363	09.02.01-10	2009/6/19	Y	N	N		-	DCD_09.02.01-10	3	2
		920	09.02.05-11	6/5/2012	Y	N	N		-	DCD_09.02.01-11	3	4
9.2.6	Condensate Storage Facilities	157	09.02.06-1	2009/2/5	Y	N	N		-	DCD_09.02.06-1	1	2
		157	09.02.06-2	2009/2/5	Y	N	N		-	DCD_09.02.06-2	1	2
		351	09.02.06-2	2009/6/9	N	N	N		-	-	N/A	N/A
		863	09.02.06-3	12/15/2011	Y	N	N		-	DCD_09.02.06-3	1	4
		863	09.02.06-3	5/14/2012	Y	N	N		-	DCD_09.02.06-3	3	4
9.3.1	Compressed Air System	109	09.03.01-1	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		109	09.03.01-2	2008/12/25	Y	N	N	fin.	-	DCD_09.03.01-2	3	2
		109	09.03.01-3	2008/12/25	Y	N	N	fin.	-	DCD_09.03.01-3	-	2
		109	09.03.01-4	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
		109	09.03.01-5	2008/12/25	Y	N	N	fin.	-	DCD_09.03.01-5	1	2
		920	09.02.05-11	6/5/2012	Y	N	N		-	DCD_09.02.05-11	3	4

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.3.2	Process and Post-accident	294	09.03.02-1	2009/5/13	Y	N	N		-	DCD_09.03.02-1	3	2
	Sampling Systems	294	09.03.02-2	2009/5/13	N	N	N		-	-	N/A	N/A
		294	09.03.02-3	2009/5/13	N	N	N		-	-	N/A	N/A
		294	09.03.02-4	2009/5/13	Y	N	N		-	DCD_09.03.02-4	3	2
		294	09.03.02-5	2009/5/13	N	N	N		-	-	N/A	N/A
		294	09.03.02-6	2009/5/13	Y	N	N		-	DCD_09.03.02-6	0	3
		294	09.03.02-7	2009/5/13	N	N	N		-	-	N/A	N/A
		294	09.03.02-8	2009/5/13	Y	N	N		-	DCD_09.03.02-8	3	2
		325	09.03.02-9	2009/5/19	Y	N	N			DCD_09.03.02-9	4	2
		346	09.03.02-10	2009/6/8	N	N	N		-	-	N/A	N/A
		294	09.03.02-7	2009/5/13	N	N	N		-	-	N/A	N/A
		294	09.03.02-8	2009/5/13	Y	N	N		-	DCD_09.03.02-8	0	3
		346	09.03.02-10	2009/6/8	N	N	N		-	-	N/A	N/A
		448	09.03.02-11	2009/9/28	Y	N	N		-	DCD_09.03.02-11	0	3
		461	09.03.02-12	2009/11/17	Y	N	N		-	DCD_09.03.02-12	1	3
		526	09.03.02-13	2010/4/7	Y	Y	N		-	DCD_09.03.02-13	3	3
		526	09.03.02-14	2010/4/7	N	N	N		-	-	N/A	N/A
		526	09.03.02-15	2010/4/7	Y	N	N		-	DCD_09.03.02-15	3	3
		526	09.03.02-16	2010/4/7	N	N	N		-	-	N/A	N/A
9.3.3	Equipment and Floor	299	09.03.03-1	2009/5/13	Y	N	N		-	DCD_09.03.03-1	3	2
	Drainage System	299	09.03.03-2	2009/5/13	Y	N	N		-	DCD_09.03.03-2	3	2
		299	09.03.03-3	2009/5/13	Y	N	N		-	DCD_09.03.03-3	3	2
		299	09.03.03-4	2009/5/13	N	N	N		-	-	N/A	N/A
		299	09.03.03-5	2009/5/13	N	N	N		-	-	N/A	N/A
		299	09.03.03-6	2009/5/13	Y	N	N		-	DCD_09.03.03-6	3	2
		299	09.03.03-7	2009/5/13	Y	N	N		-	DCD_09.03.03-7	3	2
		299	09.03.03-8	2009/5/13	Y	N	N		-	DCD_09.03.03-8	3	2
		299	09.03.03-9	2009/5/13	Y	N	N		-	DCD_09.03.03-9	3	2
		299	09.03.03-10	2009/5/13	Y	N	N		-	DCD_09.03.03-10	3	2
		299	09.03.03-11	2009/5/13	Y	N	N		-	DCD_09.03.03-11	3	2
		299	09.03.03-12	2009/5/13	Y	N	N		-	DCD_09.03.03-12	3	2
		299	09.03.03-13	2009/5/13	N	N	N		-	-	N/A	N/A
		299	09.03.03-14	2009/5/13	N	N	N		-	-	N/A	N/A
		426	09.03.03-15	2009/9/14	Y	N	N		-	DCD_09.03.03-15	-	2
		426	09.03.03-16	2009/9/14	Y	N	N		-	DCD_09.03.03-16	0	3
		426	09.03.03-17	2009/9/14	Y	N	N		-	DCD_09.03.03-17	-	2
		591	09.03.03-18	2010/7/7	N	N	N		-	-	N/A	N/A
		591	09.03.03-19	2010/7/7	Y	N	N		-	DCD_09.03.03-19	4	3

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.3.4	Chemical and Volume Control Syst	280	09.03.04-1	2009/4/14	N	N	N		-	-	N/A	N/A
	(PWR)	280	09.03.04-2	2009/4/14	N	N	N		-	-	N/A	N/A
	(Including Boron Recovery System)	280	09.03.04-3	2009/4/14	N	N	N		-	-	N/A	N/A
		280	09.03.04-4	2009/4/14	N	N	N		-	-	N/A	N/A
		280	09.03.04-5	2009/4/14	N	N	N		-	-	N/A	N/A
		280	09.03.04-6	2009/4/14	N	N	N		-	-	N/A	N/A
		380	09.03.04-7	2009/6/26	N	N	N		-	-	N/A	N/A
		380	09.03.04-8	2009/6/26	Y	N	N		-	DCD_09.03.04-8	3	2
		384	09.03.04-9	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	Y	N	N		-	DCD_09.03.04-11	4	2
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	Y	N	N		-	DCD_09.03.04-14	4	2
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	Y	N	N		-	DCD_09.03.04-17	4	2
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	N	N	N		-	-	N/A	N/A
		384	09.03.04-10	2009/7/17	Y	N	N		-	DCD_09.03.04-24	4	2
		384	09.03.04-10	2010/4/7	Y	Y	N		-	DCD_09.03.04-10	3	3
		828	09.03.04-25	9/22/2011	Y	N	N		-	DCD_09.03.04-25	1	4
9.4.1	Control Room Area	63	09.04.01-1 RAI 9.4.1-1	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
	Ventilation System	63	09.04.01-1 RAI 9.4.1-2	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-2	1	2
		63	09.04.01-1 RAI 9.4.1-3	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-3	1	2
		63	09.04.01-1 RAI 9.4.1-4	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-5	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-6	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-7	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-8	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-8	1	2
		63	09.04.01-1 RAI 9.4.1-9	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-10	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-10	1	2
		63	09.04.01-1 RAI 9.4.1-11	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-12	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-13	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-15	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-16	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-16	1	2
		63	09.04.01-1 RAI 9.4.1-17	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-18	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-19	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-19	-	2
		63	09.04.01-20 RAI 9.4.1-20	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		582	09.04.01-20 RAI 9.4.1-20	2011/6/7	N	N	N		-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-21	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-21	1	2
		63	09.04.01-1 RAI 9.4.1-22	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-22	-	2
		63	09.04.01-1 RAI 9.4.1-23	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-23	1	2
		63	09.04.01-1 RAI 9.4.1-24	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-24	-	2
		63	09.04.01-1 RAI 9.4.1-25	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-25	1	2
		63	09.04.01-1 RAI 9.4.1-26	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-26	1	2
		63	09.04.01-1 RAI 9.4.1-27	2008/10/3	Y	Y	N	fin.	-	DCD_09.04.01-27	1	2
		63	09.04.01-1 RAI 9.4.1-28	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-28	-	2
		63	09.04.01-1 RAI 9.4.1-29	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-30	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		63	09.04.01-1 RAI 9.4.1-31	2008/10/3	Y	N	N	fin.	-	DCD_09.04.01-31	1	2
		63	09.04.01-1 RAI 9.4.1-32	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		327	09.04.01-2A	2009/6/19	Y	N	N		-	DCD_09.04.01-2A	4	2

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		327	09.04.01-3A	2009/6/19	Y	N	N		-	DCD_09.04.01-3A	-	2
		327	09.04.01-4	2009/6/19	N	N	N		-	-	N/A	N/A
		327	09.04.01-6A	2009/6/19	Y	N	N		-	DCD_09.04.01-6A	4	2
		327	09.04.01-7	2009/6/19	N	N	N		-	-	N/A	N/A
		327	09.04.01-8	2009/6/19	N	N	N		-	-	N/A	N/A
		327	09.04.01-9A	2009/6/19	Y	N	N		-	DCD_09.04.01-9A	4	2
		442	09.04.01-10	2009/9/18	N	N	N		-	-	N/A	N/A
		442	09.04.01-11A	2009/9/18	Y	N	N		-	DCD_09.04.01-11A	-	2
		63	09.04.01-14	2008/10/3	N	N	N	fin.	-			
		63	09.04.01-14	2010/6/29	N	N	N		-	-	N/A	N/A
		327	09.04.01-5	2009/6/19	N	N	N		-			
		327	09.04.01-5	2010/6/29	N	N	N		-	-	N/A	N/A
		327	09.04.01-9	2010/1/29	Y	N	N		-	DCD_09.04.01-9	2	3
		475	09.04.01-12A	2009/11/20	Y	Y	N		-	DCD_09.04.01-12A	1	3
		475	09.04.01-13A	2009/11/20	Y	N	N		-	DCD_09.04.01-13A	1	3
		475	09.04.01-14A	2009/11/20	N	N	N		-	-	N/A	N/A
		484	09.04.01-15A	2009/12/9	N	N	N		-	-	N/A	N/A
		582	09.04.01-16	2010/7/16	Y	N	N		-	DCD_09.04.01-16	4	3
		582	09.04.01-16	2010/7/16	Y	N	N			DCD_09.04.01-16	4	3
		582	09.04.01-17	2010/7/16	Y	N	N		-	DCD_09.04.01-17	4	3
		582	09.04.01-18	2010/7/16	N	N	N		-	-	N/A	N/A
		582	09.04.01-19	2010/7/16	N	N	N		-	-	N/A	N/A
		582	09.04.01-20	2010/7/16	Y	N	N		-	DCD_09.04.01-20	4	3
		582	09.04.01-21	2010/7/16	Y	N	N		-	DCD_09.04.01-21	4	3
		582	09.04.01-22	2010/7/16	Y	N	N		-	DCD_09.04.01-22	4	3
		582	09.04.01-23	2010/7/16	N	N	N		-	-	N/A	N/A
		642	09.04.01-24	2010/11/5	Y	N	N		-	DCD_09.04.01-24	5	3
		689	09.04.01-25	2011/3/15	N	N	N		-	-	N/A	N/A
		689	09.04.01-26	2011/3/15	Y	N	N		-	DCD_09.04.01-26	0	4
		689	09.04.01-27	2011/3/15	N	N	N		-	-	N/A	N/A
		827	09.04.01-28	2011/10/7	Y	N	N		-	DCD_09.04.01-28	1	4
		827	09.04.01-28	8/24/2012	Y	Y	Y		-	DCD_09.04.01-28	3	4
		883	09.04.01-29	9/19/2012	Y	N	N		-	DCD_09.04.01-29	3	4
		883	09.04.01-30	8/2/2012	Y	N	N		-	DCD_09.04.01-30	3	4
		883	09.04.01-31	9/19/2012	N	N	N		-	-	N/A	N/A
		883	09.04.01-32	9/19/2012	N	N	N		-	-	N/A	N/A
		883	09.04.01-32	1/11/2013	Y	N	N			DCD_09.04.10-32	4	4
		883	09.04.01-32	7/19/2013	Y	N	N			DCD_09.04.10-32 S02	0	
		959	09.04.01-33	10/05/2012	Y	N	N		-	DCD_09.04.01-33	3	4

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.4.2	Spent Fuel Pool Area	65	09.04.02-1/9.4.2-1	2008/10/3	Y	N	N	fin.	-	DCD_09.04.02-1	4	2
	Ventilation System	65	09.04.02-1/9.4.2-2	2008/10/3	Y	N	N	fin.	-	DCD_09.04.02-2	4	2
		65	09.04.02-1/9.4.2-3	2008/10/3	Y	N	N	fin.	-	DCD_09.04.02-3	4	2
		65	09.04.02-1/9.4.2-4	2008/10/3	Y	N	N	fin.	-	DCD_09.04.02-4	4	2
		65	09.04.02-1/9.4.2-5	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		65	09.04.02-1/9.4.2-6	2008/10/3	N	N	N	fin.	-	-	N/A	N/A
		328	09.04.02-2	2009/5/21	N	N	N		-	-	N/A	N/A
		328	09.04.02-3	2009/5/21	Y	N	N		-	DCD_09.04.02-3	4	2
		539	09.04.02-4	2010/4/1	Y	N	N		-	DCD_09.04.02-4	3	3
		539	09.04.02-5	2010/4/1	Y	N	N		-	DCD_09.04.02-5	3	3
		592	09.04.02-6	2010/7/7	Y	N	N		-	DCD_09.04.02-6	4	3
		824	09.04.02-7	2011/10/6	Y	N	N		-	DCD_09.04.02-7	1	4
9.4.3	Auxiliary and Radwaste Area	68	09.04.03-1/9.4.3-1	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-1	-	2
	Ventilation System	68	09.04.03-1/9.4.3-2	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		68	09.04.03-1/9.4.3-3	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-3	-	2
		68	09.04.03-1/9.4.3-4	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		68	09.04.03-1/9.4.3-5	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-5	-	2
		68	09.04.03-1/9.4.3-6	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		68	09.04.03-1/9.4.3-7	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-7	4	2
		68	09.04.03-1/9.4.3-8	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-8	4	2
		68	09.04.03-1/9.4.3-9	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-9	4	2
		68	09.04.03-1/9.4.3-10	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-10	-	2
		68	09.04.03-1/9.4.3-11	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		68	09.04.03-1/9.4.3-12	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-12	-	2
		68	09.04.03-1/9.4.3-13	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		68	09.04.03-1/9.4.3-14	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-14	-	2
		68	09.04.03-1/9.4.3-15	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-15	4	2
		68	09.04.03-1/9.4.3-16	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-16	4	2
		68	09.04.03-1/9.4.3-17	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-17	4	2
		68	09.04.03-1/9.4.3-18	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-18	-	2
		68	09.04.03-1/9.4.3-19	2008/10/8	Y	N	N	fin.	-	DCD_09.04.03-19	4	2
		355	09.04.03-1	2009/7/17								
		355	09.04.03-2	2009/7/17	Y	N	N		-	DCD_09.04.03-2	-	2
		355	09.04.03-3	2009/7/17	Y	N	N		-	DCD_09.04.03-3	4	2
		355	09.04.03-4	2009/7/17	Y	N	N		-	DCD_09.04.03-4	-	2
		355	09.04.03-5	2009/7/17	N	N	N		-	-	N/A	N/A
		355	09.04.03-6	2009/7/17	Y	N	N		-	DCD_09.04.03-6	4	2
		355	09.04.03-7	2009/7/17	Y	N	N		-	DCD_09.04.03-7	4	2
		483	09.04.03-08	2010/2/5	Y	N	N		-	DCD_09.04.03-08	2	3
		483	09.04.03-09	2010/2/5	Y	N	N		-	DCD_09.04.03-09	2	3
		483	09.04.03-10	2010/2/5	N	N	N		-	-	N/A	N/A
		634	09.04.03-11	2010/10/15	Y	N	N		-	DCD_09.04.03-11	5	3
		634	09.04.03-12	2010/10/15	Y	N	N		-	DCD_09.04.03-12	5	3
		634	09.04.03-13	2010/10/15	Y	N	N		-	DCD_09.04.03-13	5	3
		779	09.04.03-14	2011/8/11	Y	N	N		-	DCD_09.04.03-14	1	4
		779	09.04.03-15	2011/8/11	Y	N	N		-	DCD_09.04.03-15	1	4
		779	09.04.03-16	2011/8/11	Y	N	N		-	DCD_09.04.03-16	1	4
		831	09.04.03-17	2012/1/27	N	N	N		-	-	N/A	N/A
		831	09.04.03-18	2012/1/27	Y	N	N		-	DCD_09.04.03-18	2	4
		831	09.04.03-19	2012/1/27	Y	Y	Y		-	DCD_09.04.03-19	2	4
		831	09.04.03-20	2012/1/27	Y	N	N		-	DCD_09.04.03-20	2	4
		831	09.04.03-21	2012/1/27	N	N	N		-	-	N/A	N/A

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.4.4	Turbine Area Ventilation System	66	09.04.04-1/9.4.4.1	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		66	09.04.04-1/9.4.4-2	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		66	09.04.04-1/9.4.4-3	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		66	09.04.04-1/9.4.4-4	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		66	09.04.04-1/9.4.4-5	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		66	09.04.04-1/9.4.4-6	2008/9/22	N	N	N	fin.	-	-	N/A	N/A
		67	09.04.04-2/9.4.4-7	2008/10/6	Y	N	N	fin.	-	DCD_09.04.04-7	1	2
		67	09.04.04-2/9.4.4-8	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		67	09.04.04-2/9.4.4-9	2008/10/6	Y	N	N	fin.	-	DCD_09.04.04-9	1	2
		67	09.04.04-2/9.4.4-10	2008/10/6	Y	N	N	fin.	-	DCD_09.04.04-10	2	2
		67	09.04.04-2/9.4.4-11	2008/10/6	Y	N	N	fin.		DCD_09.04.04-11	1	2
		67	09.04.04-2/9.4.4-12	2008/10/6	Y	N	N	fin.	-	DCD_09.04.04-12	1	2
		341	09.04.04-3	2009/6/1	N	N	N		-	-	N/A	N/A
		541	09.04.03-4	2010/3/30	N	N	N		-	-	N/A	N/A
		541	09.04.04-5	2010/3/30	Y	N	N		-	DCD_09.04.04-5	3	3
		586	09.04.04-6	2010/6/10	N	N	N		-	-	N/A	N/A
		713	09.04.04-7	2011/4/6	N	N	N		-	-	N/A	N/A
		814	09.04.04-8	9/26/2012	Y	N	N		-	DCD_09.04.04-8	4	4
9.4.5	Engineered Safety Feature	64	09.04.05-1/9.4.5-1	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
	Ventilation System	64	09.04.05-1/9.4.5-2	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-5	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-6	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-6	4	2
		64	09.04.05-1/9.4.5-7	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-7	-	2
		64	09.04.05-1/9.4.5-8	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-8	4	2
		64	09.04.05-1/9.4.5-9	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-10	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-10	-	2
		64	09.04.05-1/9.4.5-11	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-11	4	2
		64	09.04.05-1/9.4.5-12	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-12	4	2
		64	09.04.05-1/9.4.5-13	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-13	4	2
		64	09.04.05-1/9.4.5-14	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-14	4	2
		64	09.04.05-1/9.4.5-15	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-15	4	2
		64	09.04.05-1/9.4.5-16	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-16	-	2
		64	09.04.05-1/9.4.5-17	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-17	-	2
		64	09.04.05-1/9.4.5-18	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-18	2012/3/22	N	N	N		-	-	N/A	N/A
		64	09.04.05-1/9.4.5-19	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-19	4	2
		64	09.04.05-1/9.4.5-20	2008/10/6	Y	N	N	fin.	-	DCD_09.04.05-20	4	2
		64	09.04.05-1/9.4.5-21	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-23	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		64	09.04.05-1/9.4.5-24	2008/10/6	N	N	N	fin.	-	-	N/A	N/A
		356	09.04.05-2	2009/7/17	Y	N	N		-	DCD_09.04.05-2	-	2
		356	09.04.05-5	2009/7/17	Y	N	N		-	DCD_09.04.05-5	4	2
		356	09.04.05-6	2009/7/17	Y	N	N		-	DCD_09.04.05-6	4	2
		356	09.04.05-7	2009/7/17	N	N	N		-	-	N/A	N/A
		356	09.04.05-8	2009/7/17	Y	N	N		-	DCD_09.04.05-8	4	2
		64	09.04.05-1/9.4.5-3	2008/10/6	N	N	N	fin.	-			

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		64	09.04.05-1/9.4.5-3	2010/6/29	N	N	N		-	-	N/A	N/A
		64	09.04.05-1/9.4.5-4	2008/10/6	N	N	N	fin.	-			
		64	09.04.05-1/9.4.5-4	2010/6/29	N	N	N		-	-	N/A	N/A
		64	09.04.05-1/9.4.5-22	2008/10/6	N	N	N	fin.	-			
		64	09.04.05-1/9.4.5-22	2010/6/29	N	N	N		-	-	N/A	N/A
		356	09.04.05-3	2009/7/17	N	N	N		-			
		356	09.04.05-3	2010/6/29	N	N	N		-	-	N/A	N/A
		356	09.04.05-4	2009/7/17	N	N	N		-			
		356	09.04.05-4	2010/6/29	N	N	N		-	-	N/A	N/A
		356	09.04.05-9	2009/7/17	N	N	N		-			
		356	09.04.05-9	2010/6/29	N	N	N		-	-	N/A	N/A
		474	09.04.05-10	11/13/2009	Y	N	N		-	DCD_09.04.05-10	0	3
		583	09.04.05-11	2010/6/22	Y	N	N		-	DCD_09.04.05-11	4	3
		583	09.04.05-12	2010/6/22	Y	N	N		-	DCD_09.04.05-12	4	3
		666	09.04.05-13	2010/12/20	N	N	N		-	-	N/A	N/A
		670	09.04.05-14	2010/12/28	Y	N	N		-	DCD_09.04.05-14	7	3
		670	09.04.05-15	2010/12/28	N	N	N		-	-	N/A	N/A
		670	09.04.05-16	2010/12/28	Y	N	N		-	DCD_09.04.05-16	7	3
		670	09.04.05-17	2010/12/28	Y	N	N		-	DCD_09.04.05-17	7	3
		670	09.04.05-18	2010/12/28	N	N	N		-	-	N/A	N/A
		690	09.04.05-19	2011/3/15	N	N	N		-	-	N/A	N/A
		825	09.04.05-20	2011/10/6	N	N	N		-	-	N/A	N/A
		825	09.04.05-21	2011/10/6	Y	N	N		-		1	4
		825	09.04.05-22	2011/10/6	N	N	N		-	-	N/A	N/A
9.5.1	Fire Protection Program	30	09.05.01-1	2008/9/3	N	N	N	fin.	-	-	N/A	N/A
		30	09.05.01-2	2008/9/3	Y	N	N	fin.	-	DCD_09.05.01-2	1	2
		30	09.05.01-3	2008/9/3	N	N	N	fin.	-	-	N/A	N/A
		30	09.05.01-4	2008/9/3	Y	N	N	fin.	-	DCD_09.05.01-4	1	2
		30	09.05.01-5	2008/9/3	Y	Y	N	fin.	-	DCD_09.05.01-5	1	2
		30	09.05.01-6	2008/9/3	Y	Y	N	fin.	-	DCD_09.05.01-6	1	2
		30	09.05.01-7	2008/9/3	Y	Y	N	fin.	-	DCD_09.05.01-7	1	2
		30	09.05.01-8	2008/9/3	Y	N	N	fin.	-	DCD_09.05.01-8	2	2
		30	09.05.01-9	2008/9/3	Y	N	N	fin.	-	DCD_09.05.01-9	3	2
		30	09.05.01-10	2008/9/3	N	N	N	fin.	-	-	N/A	N/A
		30	09.05.01-11	2008/9/3	Y	N	N	fin.	-	DCD_09.05.01-11	3	2
		30	09.05.01-12	2008/9/3	N	N	N	fin.	-	-	N/A	N/A
		30	09.05.01-13	2008/9/3	N	N	N	fin.	-	-	N/A	N/A
		87	09.05.01-14	2008/11/26	Y	N	N	fin.	-	DCD_09.05.01-14	3	2
		87	09.05.01-15	2008/11/26	Y	Y	N	fin.	-	DCD_09.05.01-15	1	2
		87	09.05.01-16	2008/11/26	N	N	N	fin.	-	-	N/A	N/A
		87	09.05.01-17	2008/11/26	Y	N	N	fin.	-	DCD_09.05.01-17	1	2
		537	09.05.01-18	04/13/2010	Y	N	N		-	DCD_09.05.01-18	3	3
		537	09.05.01-19	04/13/2010	Y	N	N		-	DCD_09.05.01-19	3	3

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.5.2	Communications Systems	74	09.05.02-1	2008/10/22	N	N	N	fin.	-	-	N/A	N/A
		74	09.05.02-2	2008/10/22	N	N	N	fin.	-	-	N/A	N/A
		74	09.05.02-3	2008/10/22	N	N	N	fin.	-	-	N/A	N/A
		74	09.05.02-4	2008/10/22	Y	N	N	fin.	-	DCD_09.05.02-4	2	2
		74	09.05.02-5	2008/10/22	Y	N	N	fin.	-	DCD_09.05.02-5	1	2
		139	09.05.02-6	2009/2/20	Y	N	N		-	DCD_09.05.02-6	1	2
		139	09.05.02-6	2011/7/26	Y	Y	N		-	DCD_09.05.02-6	1	4
		139	09.05.02-7	2009/2/20	Y	N	N		-	DCD_09.05.02-7	1	2
		139	09.05.02-8	2009/2/20	Y	N	N		-	DCD_09.05.02-8	1	2
		139	09.05.02-9	2009/2/20	Y	N	N		-	DCD_09.05.02-9	1	2
		139	09.05.02-10	2009/2/20	Y	N	N		-	DCD_09.05.02-10	1	2
		859	09.05.02-11	11/30/2011	Y	N	N		-	DCD_09.05.02-11	1	4
		860	09.05.02-12	12/02/2011	N	N	N		-	-	N/A	N/A
9.5.3	Lighting Systems	34	09.05.03-1	2008/9/8	N	N	N	fin.	-	-	N/A	N/A
		34	09.05.03-2	2008/9/8	Y	N	N	fin.	-	DCD_09.05.03-2	1	2
		34	09.05.03-3	2008/9/8	Y	N	N	fin.	-	DCD_09.05.03-3	1	2
		34	09.05.03-4	2008/9/8	Y	N	N	fin.	-	DCD_09.05.03-4	2	2
		34	09.05.03-5	2008/9/8	N	N	N	fin.	-	-	N/A	N/A
		34	09.05.03-6	2008/9/8	Y	N	N	fin.		DCD_09.05.03-6	2	2
		80	09.05.03-7/9.5.3-05 S02	2008/11/5	Y	N	N	fin.	-	CD_09.05.03-7(05_S0	2	2
		80	09.05.03-7/9.5.3-08 S02	2008/11/5	Y	N	N	fin.	-	CD_09.05.03-7(08_S0	2	2
		80	09.05.03-7/9.5.3-10 S02	2008/11/5	Y	N	N	fin.	-	CD_09.05.03-7(10_S0	2	2
9.5.4	Emergency Diesel Engine Fuel	317	09.05.04-1	2009/6/9	Y	N	N		-	DCD_09.05.04-1	4	2
	Oil Storage and Transfer System	317	09.05.04-2	2009/6/9	N	N	N		-	-	N/A	N/A
		317	09.05.04-3	2009/6/9	N	N	N		-	-	N/A	N/A
		317	09.05.04-4	2009/6/9	N	N	N		-	-	N/A	N/A
		317	09.05.04-5	2009/6/9	Y	N	N		-	DCD_09.05.04-5	4	2
		318	09.05.04-6	2009/6/9	Y	N	N		-	DCD_09.05.04-6	-	2
		318	09.05.04-7	2009/6/9	Y	N	N		-	DCD_09.05.04-7	4	2
		318	09.05.04-8	2009/6/9	Y	N	N		-	DCD_09.05.04-8	4	2
		318	09.05.04-9	2009/6/9	Y	N	N		-	DCD_09.05.04-9	4	2
		318	09.05.04-10	2009/6/9	Y	N	N		-	DCD_09.05.04-10	4	2
		318	09.05.04-11	2009/6/9	Y	N	N		-	DCD_09.05.04-11	-	2
		318	09.05.04-12	2009/6/9	Y	N	N		-	DCD_09.05.04-12	-	2
		318	09.05.04-13	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-14	2009/6/9	Y	N	N		-	DCD_09.05.04-14	4	2
		318	09.05.04-15	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-16	2009/6/9	Y	N	N		-	DCD_09.05.04-16	4	2
		318	09.05.04-17	2009/6/9	N	N	N		-	-	N/A	N/A

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		318	09.05.04-18	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-19	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-20	2009/6/9	Y	N	N		-	DCD_09.05.04-20	-	2
		318	09.05.04-21	2009/6/9	Y	N	N		-	DCD_09.05.04-21	4	2
		318	09.05.04-22	2009/6/9	Y	N	N		-	DCD_09.05.04-22	-	2
		318	09.05.04-23	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-24	2009/6/9	Y	N	N		-	DCD_09.05.04-24	4	2
		318	09.05.04-25	2009/6/9	Y	N	N		-	DCD_09.05.04-25	-	2
		318	09.05.04-26	2009/6/9	Y	N	N		-	DCD_09.05.04-26	-	2
		318	09.05.04-27	2009/6/9	Y	N	N		-	DCD_09.05.04-27	-	2
		318	09.05.04-28	2009/6/9	Y	N	N		-	DCD_09.05.04-28	4	2
		318	09.05.04-29	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-30	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-31	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-32	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-33	2009/6/9	Y	N	N		-	DCD_09.05.04-33	4	2
		318	09.05.04-34	2009/6/9	Y	N	N		-	DCD_09.05.04-34	4	2
		318	09.05.04-35	2009/6/9	Y	N	N		-	DCD_09.05.04-35	4	2
		318	09.05.04-36	2009/6/9	Y	N	N		-	DCD_09.05.04-36	4	2
		318	09.05.04-37	2009/6/9	Y	N	N		-	DCD_09.05.04-37	4	2
				2011/6/7	N	N	N		-	-	N/A	N/A
		318	09.05.04-38	2009/6/9	Y	N	N		-	DCD_09.05.04-38	4	2
		318	09.05.04-39	2009/6/9	Y	N	N		-	DCD_09.05.04-39	4	2
		318	09.05.04-40	2009/6/9	Y	N	N		-	DCD_09.05.04-40	4	2
		318	09.05.04-41	2009/6/9	N	N	N		-	-	N/A	N/A
		318	09.05.04-42	2009/6/9	Y	N	N		-	DCD_09.05.04-42	4	2
		467	09.05.04-43	11/10/2009	Y	Y	N		-	DCD_09.05.04-43	1	3
		468	09.05.04-44	2009/12/10	Y	Y	N		-	DCD_09.05.04-44	1	3
		468	09.05.04-45	2009/12/10	Y	N	N		-	DCD_09.05.04-45	1	3
		468	09.05.04-46	2009/12/10	Y	N	N		-	DCD_09.05.04-46	1	3
		468	09.05.04-47	2009/12/10	Y	N	N		-	DCD_09.05.04-47	1	3
		468	09.05.04-48	2009/12/10	Y	N	N		-	DCD_09.05.04-48	1	3
		468	09.05.04-49	2009/12/10	N	N	N		-	-	N/A	N/A
		468	09.05.04-49	6/28/2013	Y	N	N			DCD_09.05.04-49	5	4
		565	09.05.04-50	2010/6/15	Y	N	N		-	DCD_09.05.04-50	4	3
		565	09.05.04-51	2010/6/15	Y	N	N		-	DCD_09.05.04-51	4	3
9.5.5	Emergency Diesel Engine											
	Cooling Water System											

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.5.6	Emergency Diesel Engine	319	09.05.06-1	2009/6/9	Y	N	N		-	DCD_09.05.06-1	4	2
	Starting System	319	09.05.06-2	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-3	2009/6/9	Y	N	N		-	DCD_09.05.06-3	4	2
		319	09.05.06-4	2009/6/9	Y	N	N		-	DCD_09.05.06-4	4	2
		319	09.05.06-5	2009/6/9	Y	N	N		-	DCD_09.05.06-5	4	2
		319	09.05.06-6	2009/6/9	Y	N	N		-	DCD_09.05.06-6	4	2
		319	09.05.06-7	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-8	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-9	2009/6/9	Y	N	N		-	DCD_09.05.06-9	4	2
		319	09.05.06-10	2009/6/9	Y	N	N		-	DCD_09.05.06-10	4	2
		319	09.05.06-11	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-12	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-13	2009/6/9	Y	N	N		-	DCD_09.05.06-13	-	2
		319	09.05.06-14	2009/6/9	Y	N	N		-	DCD_09.05.06-14	4	2
		319	09.05.06-15	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-16	2009/6/9	Y	N	N		-	DCD_09.05.06-16	-	2
		319	09.05.06-17	2009/6/9	Y	N	N		-	DCD_09.05.06-17	4	2
		319	09.05.06-18	2009/6/9	Y	N	N		-	DCD_09.05.06-18	4	2
		319	09.05.06-19	2009/6/9	Y	N	N		-	DCD_09.05.06-19	4	2
		319	09.05.06-20	2009/6/9	N	N	N		-	-	N/A	N/A
		319	09.05.06-21	2009/6/9	Y	N	N		-	DCD_09.05.06-21	4	2
		319	09.05.06-22	2009/6/9	Y	N	N		-	DCD_09.05.06-22	4	2
		319	09.05.06-23	2009/6/9	N	N	N		-	-	N/A	N/A
		504	09.05.06-24	12/23/09	Y	N	N		-	DCD_09.05.06-24	1	3
		504	09.05.06-25	12/23/09	Y	N	N		-	DCD_09.05.06-25	1	3

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.5.7	Emergency Diesel Engine	320	09.05.07-1	2009/6/9	Y	N	N		-	DCD_09.05.07-1	4	2
	Lubrication System	320	09.05.07-2	2009/6/9	N	N	N		-	-	N/A	N/A
		320	09.05.07-3	2009/6/9	Y	N	N		-	DCD_09.05.07-3	4	2
		320	09.05.07-4	2009/6/9	Y	N	N		-	DCD_09.05.07-4	-	2
		320	09.05.07-5	2009/6/9	Y	N	N		-	DCD_09.05.07-5	4	2
		320	09.05.07-6	2009/6/9	Y	N	N		-	DCD_09.05.07-6	4	2
		320	09.05.07-7	2009/6/9	Y	N	N		-	DCD_09.05.07-7	4	2
		320	09.05.07-8	2009/6/9	Y	N	N		-	DCD_09.05.07-8	-	2
		320	09.05.07-9	2009/6/9	Y	N	N		-	DCD_09.05.07-9	4	2
		320	09.05.07-10	2009/6/9	Y	N	N		-	DCD_09.05.07-10	-	2
		320	09.05.07-11	2009/6/9	Y	N	N		-	DCD_09.05.07-11	4	2
		320	09.05.07-12	2009/6/9	Y	N	N		-	DCD_09.05.07-12	4	2
		320	09.05.07-13	2009/6/9	N	N	N		-	-	N/A	N/A
		320	09.05.07-14	2009/6/9	Y	N	N		-	DCD_09.05.07-14	3	2
		320	09.05.07-15	2009/6/9	Y	N	N		-	DCD_09.05.07-15	4	2
		320	09.05.07-16	2009/6/9	Y	N	N		-	DCD_09.05.07-16	4	2
		320	09.05.07-17	2009/6/9	Y	N	N		-	DCD_09.05.07-17	4	2
		469	09.05.07-18	11/6/2009	N	N	N		-	-	N/A	N/A
		469	09.05.07-19	11/6/2009	N	N	N		-	-	N/A	N/A
		506	09.05.07-20	2010/1/29	Y	N	N		-	DCD_09.05.07-20	2	3
		506	09.05.07-21	2010/1/29	N	N	N		-	-	N/A	N/A
		506	09.05.07-22	2010/1/29	Y	N	N		-	DCD_09.05.07-22	2	3
		506	09.05.07-23	2010/1/29	Y	N	N		-	DCD_09.05.07-23	2	3
		556	09.05.07-24	2010/4/27	Y	N	N		-	DCD_09.05.07-24	3	3

Chapter:9

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
9.5.8	Emergency Diesel Engine	321	09.05.08-1	2009/6/9	Y	N	N		-	DCD_09.05.08-1	4	2
	Combustion Air Intake and	321	09.05.08-2	2009/6/9	Y	N	N		-	DCD_09.05.08-2	-	2
	Exhaust System	321	09.05.08-3	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-4	2009/6/9	Y	N	N		-	DCD_09.05.08-4	-	2
		321	09.05.08-5	2009/6/9	Y	N	N		-	DCD_09.05.08-5	4	2
		321	09.05.08-6	2009/6/9	Y	N	N		-	DCD_09.05.08-6	4	2
		321	09.05.08-7	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-8	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-9	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-10	2009/6/9	Y	N	N		-	DCD_09.05.08-10	4	2
		321	09.05.08-11	2009/6/9	Y	N	N		-	DCD_09.05.08-11	4	2
		321	09.05.08-12	2009/6/9	Y	N	N		-	DCD_09.05.08-12	4	2
		321	09.05.08-13	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-14	2009/6/9	N	N	N		-	-	N/A	N/A
		321	09.05.08-15	2009/6/9	Y	N	N		-	DCD_09.05.08-15	4	2
		321	09.05.08-16	2009/6/9	Y	N	N		-	DCD_09.05.08-16	4	2
		321	09.05.08-17	2009/6/9	Y	N	N		-	DCD_09.05.08-17	3	2
		470	09.05.08-18	2009/12/2	Y	N	N		-	DCD_09.05.08-18	1	3
		470	09.05.08-19	2009/12/2	N	N	N		-	-	N/A	N/A
		470	09.05.08-20	2009/12/2	Y	N	N		-	DCD_09.05.08-20	1	3
		470	09.05.08-21	2009/12/2	Y	N	N		-	DCD_09.05.08-21	1	3
		470	09.05.08-22	2009/12/2	Y	N	N		-	DCD_09.05.08-22	1	3
		505	09.05.08-23	2010/2/1	N	N	N		-	-	N/A	N/A
		505	09.05.08-24	2010/2/1	N	N	N		-	-	N/A	N/A
		505	09.05.08-25	2010/2/1	Y	N	N		-	DCD_09.05.08-25	2	3
		557	09.05.08-26	2010/6/14	Y	N	N		-	DCD_09.05.08-26	5	3
		618	09.05.08-27	2010/11/4	Y	N	N		-	DCD_09.05.08-27	5	3
		704	09.05.08-28	2011/7/4	Y	Y	N		-	DCD_09.05.08-28	0	4

Chapter:10

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
10.2	Turbine Generator	237	10.02-1	2009/3/25	N	N	N		-	-	N/A	N/A
		237	10.02-2	2009/3/25	N	N	N		-	-	N/A	N/A
		237	10.02-3	2009/3/25	N	N	N		-	-	N/A	N/A
		237	10.02-4	2009/3/25	Y	N	N		-	DCD_10.02-4	-	2
		435	10.02-2/10.2-1	2009/8/24	N	N	N		-	-	N/A	N/A
		598	10.02-3	2010/7/20	N	N	N		-	-	N/A	N/A
		598	10.02-3	2011/6/7	Y	N	N		-	DCD_10.02.3	0	4
		598	10.02-4	2010/7/20	Y	N	N		-	DCD_10.2-4	4	3
		598	10.02-4	2011/6/7	Y	N	N		-	DCD_10.2-4	0	4
10.2.3	Turbine Rotor Integrity	199	10.02.03-1,10.2.3-1	2009/3/10	Y	N	N		-	DCD_10.02.03-1	2	2
		199	10.02.03-1,RAI 10.02.03-1	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-1,RAI 10.02.03-1	6/12/2013	Y	N	-		-	-	N/A	N/A
		199	10.02.03-2,10.2.3-2	2009/3/10	Y	N	N		-	DCD_10.02.03-2	2	2
		199	10.02.03-2,RAI 10.02.03-2	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-2,RAI 10.02.03-2	6/12/2013	Y	N	-		-	-	N/A	N/A
		199	10.02.03-3,10.2.3-3	2009/3/10	Y	N	N		-	DCD_10.02.03-3	3	2
		199	10.02.03-3,RAI 10.02.03-3	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-3,RAI 10.02.03-3	6/12/2013	Y	N	-		-	-	N/A	N/A
		199	10.02.03-4,10.2.3-4	2009/3/10	Y	N	N		-	DCD_10.02.03-4	2	2
		199	10.02.03-4,RAI 10.02.03-4	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-4,RAI 10.02.03-4	6/12/2013	Y	N	-		-	-	N/A	N/A
		199	10.02.03-5,10.2.3-5	2009/3/10	Y	N	N		-	DCD_10.02.03-5	2	2
		199	10.02.03-5,RAI 10.02.03-5	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-5,RAI 10.02.03-5	6/12/2013	Y	N	-		-	-	N/A	N/A
		199	10.02.03-6,10.2.3-6	2009/3/10	Y	N	N		-	DCD_10.02.03-6	2	2
		199	10.02.03-6,RAI 10.02.03-6	6/20/2012	Y	N	N		-	-	N/A	N/A
		199	10.02.03-6,RAI 10.02.03-6	6/12/2013	Y	N	'-		-	-	N/A	N/A
		199	10.02.03-7,10.2.3-7	2009/3/10	Y	N	N		-	DCD_10.02.03-7	2	2
		199	10.02.03-7,RAI 10.02.03-7	6/20/2012	N	N	N		-	-	N/A	N/A
		199	10.02.03-7,RAI 10.02.03-7	6/12/2013	N	N	-		-	DCD_10.02.03-7	5	4
		574	10.02.03-8, RAI10.02.03-8	2010/6/10	N	N	N		-	-	N/A	N/A

Chapter:10

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		574	10.02.03-8, RAI10.02.03-8	03/30/2012	Y	N	N		-	-	N/A	N/A
		574	10.02.03-8,RAI 10.2.3-8	5/31/2013	Y	N	-			-	N/A	N/A
		574	10.02.03-9, RAI 10.02.03-9	2010/6/10	N	N	N		-	-	N/A	N/A
				03/30/2012	N	N	N		-	-	N/A	N/A
		574	10.02.03-9, RAI 10.02.03-9	2010/6/10	Y	N	N		-	DCD_10.02.03-9	4	3
		574	10.02.03-9,RAI 10.2.3-9	5/31/2013	Y	N	N			DCD_10.02.03-9	5	4
		574	0.02.03-10, RAI 10.02.03-1	04/03/2012	Y	N	N		-	DCD_10.02.03-10	3	4
		574	0.02.03-10, RAI 10.02.03-1	2010/6/10	N	N	N		-	-	N/A	N/A
		574	10.02.03-10,RAI 10.2.3-10	5/31/2013	Y	N	N			DCD_10.02.03-10	5	4
		574	0.02.03-11, RAI 10.02.03-1	04/03/2012	Y	N	N		-	DCD_10.02.03-11	3	4
		574	0.02.03-11, RAI 10.02.03-1	5/31/2013	Y	N	N		-	DCD_10.02.03-11	-	4
10.3	Main Steam Supply System	329	10.3-1	2009/5/26	Y	Y	N		-	DCD_10.3-1	3	2
		431	10.03-4/10.3-1	2009/8/28	N	N	N		-	-	N/A	N/A
		329	10.3-2	2009/5/26	N	N	N		-	-	N/A	N/A
		329	10.3-3	2009/5/26	N	N	N		-	-	N/A	N/A
10.3.6	Steam and	250	10.03.06-1	2009/4/1	Y	N	N		-	DCD_10.03.06-1	2	2
	Feedwater System Materials	250	10.03.06-2	2009/4/1	Y	N	N		-	DCD_10.03.06-2	2	2
		250	10.03.06-3	2009/4/1	Y	N	N		-	DCD_10.03.06-3	4	2
		250	10.03.06-4	2009/4/1	Y	N	N		-	DCD_10.03.06-4	2	2
		250	10.03.06-5	2009/4/1	Y	N	N		-	DCD_10.03.06-5	2	2
		250	10.03.06-6	2009/4/1	Y	Y	N		-	DCD_10.03.06-6	2	2
		250	10.03.06-7	2009/4/1	Y	N	N		-	DCD_10.03.06-7	2	2
		397	10.03.06-8	2009/7/17	Y	N	N		-	DCD_10.03.06-8	3	2
		397	10.03.06-9	2009/7/17	Y	N	N		-	DCD_10.03.06-9	3	2
			10.03.06-1									
			10.03.06-2									
			10.03.06-3									
			10.03.06-4									
			10.03.06-5									
			10.03.06-6									
			10.03.06-7									
			10.03.06-8									
			10.03.06-9									
		500	10.03.06-10	12/24/2009	Y	N	N		-	DCD_10.03.06-10	1	3
		500	10.03.06-11	12/24/2009	N	N	N		-	-	N/A	N/A
		500	10.03.06-12	12/24/2009	Y	N	N		-	DCD_10.03.06-12	1	3
		500	10.03.06-12	12/17/2010	Y	N	N		-	DCD_10.03.06-12	0	4
		500	10.03.06-12	4/4/2011	Y	N	N		-	DCD_10.03.06-12	0	4

Chapter:10

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
10.4.1	Main Condensers	245	10.4.1-1	2009/3/30	Y	N	N		-	DCD_10.4.1-1	2	2
		434	10.04.01-2/10.4.1-1	2009/8/26	Y	N	N		-	CD_10.04.01-2/10.4.1-	4	2
		245	10.4.1-2	2009/3/30	N	N	N		-	-	N/A	N/A
		245	10.4.1-3	2009/3/30	N	N	N		-	-	N/A	N/A
10.4.2	Main Condenser Evacuation System	246	10.4.2-1	2009/3/30	N	N	N		-	-	N/A	N/A
		436	10.04.02-2/10.4.2-1	2009/8/26	Y	N	N		-	CD_10.04.02-2/10.4.2-	4	2
10.4.2	Main Condenser Evacuation System											
10.4.3	Turbine Gland Sealing System	236	10.4.3-1	2009/3/24	Y	N	N		-	DCD_10.4.3-1	2	2
		437	10.04.03-2/10.4.3-1	2009/8/26	Y	N	N		-	CD_10.04.03-2/10.4.3-	4	2
		236	1..4.3-2	2009/3/24	N	N	N		-	-	N/A	N/A
10.4.4	Turbine Bypass System	159	10.4.4-1	2009/2/20	N	N	N		-	-	N/A	N/A
		430	10.03.04-3/10.4.4-1	2009/8/28	Y	N	N		-	CD_10.03.04-3/10.4.4-	4	2
		430	10.04.04-1	2012/5/11	Y	N	N		-	-	N/A	N/A
10.4.5	Circulating Water System											
10.4.6	Condensate Cleanup System	235	10.04.06-1	2009/3/25	N	N	N		-	-	N/A	N/A
		235	10.04.06-2	2009/3/25	N	N	N		-	-	N/A	N/A
		235	10.04.06-3	2009/3/25	N	N	N		-	-	N/A	N/A
		235	10.04.06-4	2009/3/25	Y	N	N		-	DCD_10.04.06-4	2	2
		235	10.04.06-5	2009/3/25	N	N	N		-	-	N/A	N/A
		383	10.04.06-6	2009/7/6	N	N	N		-	-	N/A	N/A
		383	10.04.06-7	2009/7/6	N	N	N		-	-	N/A	N/A
		441	10.04.06-8	2009/9/16	Y	N	N		-	DCD_10.04.06-8	0	3
		441	10.04.06-9	2009/9/16	N	N	N		-	-	N/A	N/A
		441	10.04.06-10	2009/9/16	N	N	N		-	-	N/A	N/A
		543	10.04.06-11/OI 10.04.06-1	2010/4/26	N	N	N		-	-	N/A	N/A
		543	10.04.06-12/OI 10.04.06-2	2010/4/26	N	N	N		-	-	N/A	N/A
		543	10.04.06-13/OI 10.04.06-3	2010/4/26	N	N	N		-	-	N/A	N/A
		543	10.04.06-14/OI 10.04.06-4	2010/4/26	N	N	N		-	-	N/A	N/A
		543	10.04.06-15/OI 10.04.06-5	2010/4/26	N	N	N		-	-	N/A	N/A
		630	10.04.06-16	2010/10/6	Y	N	N		-	DCD_10.04.06-16	5	3
		807	10.04.06-17	2011/9/12	Y	Y	N		-	DCD_10.04.06-17	-	4
		807	10.04.06-17	2011/9/29	Y	Y	N		-	DCD_10.04.06-17	2	4

Chapter:10

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
10.4.7	Condensate and Feedwater System	124	10.4.7-1	2008/12/25	N	N	N	fin.	-	-		
		124	10.4.7-1	2009/6/1	Y	Y	N		-	DCD_10.4.7-1	3	2
10.4.8	Steam Generator Blowdown System	251	10.04.08-1	2009/4/1	Y	N	N		-	DCD_10.04.08-1	2	2
	(PWR)	251	10.04.08-2	2009/4/1	N	N	N		-	-	N/A	N/A
		251	10.04.08-3	2009/4/1	N	N	N		-	-	N/A	N/A
		251	10.04.08-4	2009/4/1	Y	N	N		-	DCD_10.04.08-4	2	2
		251	10.04.08-5	2009/4/1	Y	N	N		-	DCD_10.04.08-5	2	2
		251	10.04.08-6	2009/4/1	Y	N	N		-	DCD_10.04.08-6	2	2
		251	10.04.08-7	2009/4/1	Y	N	N		-	DCD_10.04.08-7	2	2
		251	10.04.08-8	2009/4/1	Y	N	N		-	DCD_10.04.08-8	3	2
		251	10.04.08-8	7/16/2013	Y	N			-	DCD_10.04.08-8	0	
		862	10.04.08-9	12/12/2011	Y	N	N		-	DCD_10.04.08-9	1	4
		862	10.04.08-10	12/12/2011	N	N	N		-	-	N/A	N/A
		862	10.04.08-11	12/12/2011	Y	N	N		-	DCD_10.04.08-11	1	4
		862	10.04.08-11	7/26/2013	Y	N	N		-	DCD_10.04.08-12	-	4
		922	10.04.08-12	6/21/2012	Y	Y	Y		-	DCD_10.04.08-12	3	4
10.4.9	Auxiliary Feedwater System (PWR)	160	10.04.09-1	2009/2/20	Y	N	N		-	DCD_10.04.09-1	1	2
		160	10.04.09-2	2009/2/20	N	N	N		-	-	N/A	N/A
		160	10.04.09-3	2009/2/20	Y	N	N		-	DCD_10.04.09-3	-	2
		160	10.04.09-4	2009/2/20	Y	N	N		-			
		160	10.04.09-4	2009/6/1	Y	Y	N		-	DCD_10.04.09-4	3	2
		160	10.04.09-5	2009/2/20	Y	N	N		-	DCD_10.04.09-5	1	2
		160	10.04.09-6	2009/2/20	Y	N	N		-	DCD_10.04.09-6	1	2
		160	10.04.09-7	2009/2/20	Y	N	N		-	DCD_10.04.09-7	1	2
		160	10.04.09-8	2009/2/20	Y	N	N		-	DCD_10.04.09-8	1	2
		160	10.04.09-9	2009/2/20	Y	N	N		-	DCD_10.04.09-9	1	2
		160	10.04.09-10	2009/2/20	Y	N	N		-	DCD_10.04.09-10	1	2
		160	10.04.09-11	2009/2/20	Y	N	N		-	DCD_10.04.09-11	1	2
		160	10.04.09-12	2009/2/20	N	N	N		-	-	N/A	N/A
		160	10.04.09-13	2009/2/20	Y	N	N		-	DCD_10.04.09-13	1	2
		160	10.04.09-14	2009/2/20	Y	N	N		-	DCD_10.04.09-14	1	2
		160	10.04.09-15	2009/2/20	Y	N	N		-	DCD_10.04.09-15	1	2
		160	10.04.09-16	2009/2/20	N	N	N		-	-	N/A	N/A
		160	10.04.09-17	2009/2/20	N	N	N		-	-	N/A	N/A
		160	10.04.09-18	2009/2/20	Y	N	N		-	DCD_10.04.09-18	-	2
		160	10.04.09-19	2009/2/20	Y	N	N		-	DCD_10.04.09-19	-	2
		160	10.04.09-20	2009/2/20	Y	N	N		-	DCD_10.04.09-20	-	2
		160	10.04.09-21	2009/2/20	Y	N	N		-	DCD_10.04.09-21	1	2
		160	10.04.09-22	2009/2/20	N	N	N		-	-	N/A	N/A
		408	10.04.09-23	2009/7/28	Y	N	N		-	DCD_10.04.09-23	3	2
		408	10.04.09-24	2009/7/28	Y	N	N		-	DCD_10.04.09-24	3	2
		408	10.04.09-25	2009/7/28	Y	N	N		-	DCD_10.04.09-25	3	2
		408	10.04.09-26	2009/7/28	N	N	N		-	-	N/A	N/A
		408	10.04.09-27	2009/7/28	Y	N	N		-	DCD_10.04.09-27	3	2
		408	10.04.09-28	2009/7/28	Y	N	N		-	DCD_10.04.09-28	-	2
		408	10.04.09-29	2009/7/28	Y	N	N		-	DCD_10.04.09-29	-	2
		408	10.04.09-30	2009/7/28	Y	N	N		-	DCD_10.04.09-30	-	2
		408	10.04.09-31	2009/7/28	N	N	N		-	-	N/A	N/A

Chapter:11

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
11.1	Source Terms	9	11.01-1	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		29	11.01-2	2008/8/6	N	N	N	fin.	-	-	N/A	N/A
11.2	Liquid Waste Management System	164	11.02-1	2009/2/18	Y	N	N		-	DCD_11.02-1	1	2
		164	11.02-2	2009/2/18	Y	N	N		-	DCD_11.02-2	1	2
		164	11.02-3	2009/2/18	Y	N	N		-	DCD_11.02-3	1	2
		164	11.02-4	2009/2/18	N	N	N		-	-	N/A	N/A
		164	11.02-5	2009/2/18	Y	N	N		-	DCD_11.02-5	1	2
		164	11.02-6	2009/2/18	N	N	N		-	-	N/A	N/A
		164	11.02-7	2009/2/18	N	N	N		-	-	N/A	N/A
		186	11.02-8	2009/3/10	Y	N	N		-	DCD_11.02-8	3	2
		186	11.02-9	2009/3/10	Y	N	N		-	DCD_11.02-9	2	2
		186	11.02-10	2009/3/10	Y	N	N		-	DCD_11.02-10	2	2
		186	11.02-11	2009/3/10	N	N	N		-	-	N/A	N/A
		186	11.02-12	2009/3/10	N	N	N		-	-	N/A	N/A
		186	11.02-13	2009/3/10	Y	N	N		-	DCD_11.02-13	2	2
		186	11.02-14	2009/3/10	N	N	N		-	-	N/A	N/A
		186	11.02-15	2009/3/10	N	N	N		-	-	N/A	N/A
		186	11.02-16	2009/3/10	Y	N	N		-	DCD_11.02-16	2	2
		186	11.02-17	2009/3/10	N	N	N		-	-	N/A	N/A
		403	11.02-18	2009/7/15	Y	N	N		-	DCD_11.02-18	4	2
		403	11.02-19	2009/7/15	Y	N	N		-	DCD_11.02-19	4	2
		403	11.02-20	2009/7/15	Y	N	N		-	DCD_11.02-20	4	2
		458	11.02-21	2009/10/26	N	N	N		-	-	N/A	N/A
		462	11.02-22	2009/11/17	Y	N	N		-	DCD_11.02-22	1	3
		462	11.02-23	2009/11/17	N	N	N		-	-	N/A	N/A
		462	11.02-24	2009/11/17	N	N	N		-	-	N/A	N/A
		462	11.02-25	2009/11/17	Y	N	N		-	DCD_11.02-25	0	3
		462	11.02-26	2009/11/17	N	N	N		-	-	N/A	N/A
		462	11.02-27	2009/11/17	Y	N	N		-	DCD_11.02-27	0	3
		523	11.02-28	2010/3/15	Y	N	N		-	DCD_11.02-28	3	3
		523	11.02-29	2010/3/15	Y	Y	N		-	DCD_11.02-29	3	3
		523	11.02-30	2010/3/15	Y	N	N		-	DCD_11.02-30	3	3
		523	11.02-31	2010/3/15	Y	N	N		-	DCD_11.02-31	3	3
		523	11.02-32	2010/3/15	Y	N	N		-	DCD_11.02-32	3	3
		523	11.02-32	7/6/2012	Y	N	N		-	DCD_11.02-32	3	4
		624	11.02-33	2010/9/24	Y	Y	N		-	DCD_11.02-33	5	3
		711	11.02-34	2011/3/30	Y	Y	N		-	DCD_11.02-34	-	3
		956	11.02-35	10/16/2012	Y	Y	Y		-	DCD_11.02-35	3	4
		989	11.02-36	4/5/2013	Y	N	N		-	DCD_11.02-36	4	4
		989	11.02-36	6/7/2013	Y	N	-		-	DCD_11.02-37	-	4

Chapter:11

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
11.3	Gaseous Waste	188	11.03-1	2009/3/10	N	N	N		-	-	N/A	N/A
	Management System	188	11.03-2	2009/3/10	N	N	N		-	-	N/A	N/A
		188	11.03-3	2009/3/10	Y	N	N		-	DCD_11.03-3	2	2
		188	11.03-4	2009/3/10	Y	N	N		-	DCD_11.03-4	2	2
		188	11.03-5	2009/3/10	N	N	N		-	-	N/A	N/A
		189	11.03-6	2009/3/10	N	N	N		-	-	N/A	N/A
		189	11.03-7	2009/3/10	N	N	N		-	-	N/A	N/A
		189	11.03-8	2009/3/10	N	N	N		-	-	N/A	N/A
		189	11.03-9	2009/3/10	N	N	N		-	-	N/A	N/A
		189	11.03-10	2009/3/10	Y	N	N		-	DCD_11.03-10	2	2
		189	11.03-11	2009/3/10	N	N	N		-	-	N/A	N/A
		402	11.03-12	2009/7/15	N	N	N		-	-	N/A	N/A
		402	11.03-13	2009/7/15	N	N	N		-	-	N/A	N/A
		439	11.03-14	2009/9/17	N	N	N		-	-	N/A	N/A
								-	COL 11.3(5) deleted	MAP-11-001	-	2
		533	11.03-15	2010/4/20	Y	N	N		-	DCD_11.03-15	3	3
		533	11.03-15	7/10/2012	Y	N	N		-	-	N/A	N/A
		535	11.03-16	2010/4/20	Y	N	N		-	DCD_11.03-16	3	3
		535	11.03-17	2010/4/20	Y	N	N		-	DCD_11.03-17	3	3
		629	11.03-18	2010/9/24	Y	N	N		-	DCD_11.03-18	5	3
		629	11.03-18	2011/6/1	Y	N	N		-	DCD_11.03-18	0	4
		712	11.03-19	2011/5/17	Y	N	N		-	DCD_11.03-19	0	4
		712	11.03-19	2011/11/21	Y	N	N		-	DCD_11.03-19	1	4
		712	11.03-19	2012/2/22	Y	N	N		-	DCD_11.03-19	-	4
11.4	Solid Waste Management System	185	11.04-1	2009/3/11	Y	N	N		-	DCD_11.04-1	2	2
		185	11..04-2	2009/3/11	Y	N	N		-	DCD_11..04-2	2	2
		185	11.04-3	2009/3/11	Y	N	N		-	DCD_11.04-3	2	2
		185	11.04-4	2009/3/11	N	N	N		-	-	N/A	N/A
		185	11.04-5	2009/3/11	Y	N	N		-	DCD_11.04-5	2	2
		187	11.04-6	2009/3/11	Y	N	N		-	DCD_11.04-6	3	2
		187	11.04-7	2009/3/11	Y	N	N		-	DCD_11.04-7	2	2
		187	11.04-8	2009/3/11	Y	N	N		-	DCD_11.04-8	2	2
		187	11.04-9	2009/3/11	Y	N	N		-	DCD_11.04-9	2	2
		187	11.04-10	2009/3/11	Y	N	N		-	DCD_11.04-10	2	2
		187	11.04-11	2009/3/11	Y	N	N		-	DCD_11.04-11	2	2
		187	11.04-12	2009/3/11	N	N	N		-	-	N/A	N/A
		187	11.04-13	2009/3/11	Y	N	N		-	DCD_11.04-13	2	2
		187	11.04-14	2009/3/11	N	N	N		-	-	N/A	N/A
		187	11.04-15	2009/3/11	Y	N	N		-	DCD_11.04-15	2	2
		187	11.04-16	2009/3/11	Y	N	N		-	DCD_11.04-16	2	2
		187	11.04-17	2009/3/11	Y	N	N		-	DCD_11.04-17	2	2
		401	11.04-18	2009/7/15	Y	N	N		-	DCD_11.04-18	4	2
		534	11.04-19	2010/4/20	Y	Y	N		-	DCD_11.04-19	3	3
		534	11.04-19	2011/6/24	Y	Y	N		-	DCD_11.04-19	-	4
		534	11.04-19	2011/9/21	Y	Y	N		-	DCD_11.04-19	1	4
		536	11.04-20	2010/4/20	Y	N	N		-	DCD_11.04-20	3	3
		536	11.04-21	2010/4/20	Y	N	N		-	DCD_11.04-21	3	3

Chapter:11

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
11.5	Process and Effluent	130	11.05-1	2009/1/30	N	N	N		-	-	N/A	N/A
	Radiological Monitoring	130	11.05-2	2009/1/30	Y	N	N		-	DCD_11.05-2	2	2
	Instrumentation and	130	11.05-3	2009/1/30	N	N	N		-	-	N/A	N/A
	Sampling Systems	130	11.05-4	2009/1/30	N	N	N		-	-	N/A	N/A
		249	11.05-5	2009/3/31	Y	N	N		-	-	N/A	N/A
		249	11.05-6	2009/4/13	N	N	N		-	-	N/A	N/A
		249	11.05-7	2009/4/13	N	N	N		-	-	N/A	N/A
		249	11.05-8	2009/4/13	N	N	N		-	-	N/A	N/A
		249	11.05-9	2009/3/31	N	N	N		-	-	N/A	N/A
		249	11.05-10	2009/3/31	Y	N	N		-	DCD_11.05-10	2	2
		249	11.05-11	2009/3/31	Y	N	N		-	DCD_11.05-11	2	2
		400	11.05-12	2009/7/15	Y	N	N		-	DCD_11.05-12	4	2
		400	11.05-13	2009/7/15	Y	N	N		-	DCD_11.05-12	4	2
		400	11.05-14	2009/7/15	N	N	N		-	-	N/A	N/A
		400	11.05-15	2009/7/15	N	N	N		-	-	N/A	N/A
		400	11.05-16	2009/7/15	Y	N	N		-	DCD_11.05-12	4	2
		400	11.05-17	2009/7/15	Y	N	N		-	DCD_11.05-12	4	2
		522	11.05-18	2010/3/8	Y	N	N		-	DCD_11.05-18	3	3

Chapter:12

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
12.1	Assuring that	89	12.01-1	2008/11/26	Y	N	N	fin.	-	DCD_12.01-1	0	2
	Occupational Radiation Exposures	89	12.01-2	2008/11/26	Y	Y	N	fin.	-	DCD_12.01-2	0	2
	Are As Low As											
	Is Reasonably Achievable											
12.2	Radiation Sources	128	12.02-1	2009/1/21	N	N	N		-	-	N/A	N/A
		128	12.02-2	2009/1/21	N	N	N		-	-	N/A	N/A
		128	12.02-3	2009/1/21	N	N	N		-	-	N/A	N/A
		140	12.02-4	2009/2/6	Y	N	N		-	DCD_12.02-4	1	2
		141	12.02-5	2009/2/6	N	N	N		-	-	N/A	N/A
		141	12.02-6	2009/2/6	Y	N	N		-	DCD_12.02-6	1	2
		142	12.02-7	2009/2/6	Y	N	N		-	DCD_12.02-7	1	2
		142	12.02-8	2009/2/6	Y	N	N		-	DCD_12.02-8	1	2
		142	12.02-9	2009/2/6	N	N	N		-	-	N/A	N/A
		143	12.02-10	2009/2/6	Y	N	N		-	DCD_12.02-10	1	2
		143	12.02-11	2009/2/6	N	N	N		-	-	N/A	N/A
		144	12.02-12	2009/2/6	Y	N	N		-	DCD_12.02-12	1	2
		145	12.02-13	2009/2/6	N	N	N		-	-	N/A	N/A
		168	12.02-14	2009/3/4	Y	N	N		-	DCD_12.02-14	2	2
		169	12.02-15	2009/2/27	Y	Y	N	fin.	-	DCD_12.02-15	1	2
		179	12.02-16	2009/3/3	N	N	N		-	-	N/A	N/A
		427	12.02-17	2009/9/28	N	N	N		-	-	N/A	N/A
		427	12.02-18	2009/9/28	Y	N	N		-	DCD_12.02-18	-	2
		427	12.02-19	2009/9/28	Y	N	N		-	DCD_12.02-19	0	3
		427	12.02-19	2010/9/14	Y	N	N		-	DCD_12.02-19	0	3
		427	12.02-19	2012/6/14	Y	N	N		-	DCD_12.02-19	3	4
		427	12.02-20	2009/9/28	N	N	N		-	DCD_12.02-20	N/A	N/A
		427	12.02-21	2009/9/28	Y	N	N		-	DCD_12.02-21	0	3
		427	12.02-22	2009/9/28	Y	N	N		-	DCD_12.02-22	0	3
		532	12.02-23	2010/4/9	Y	N	N		-	DCD_12.02-23	3	3
		532	12.02-24	2010/4/9	N	N	N		-	-	N/A	N/A
		532	12.02-25	2010/4/9	Y	N	N		-	DCD_12.02-25	3	3
		532	12.02-26	2010/4/9	Y	N	N		-	DCD_12.02-26	3	3
		532	12.02-27	2010/4/9	Y	N	N		-		3	3
		532	12.02-27	2010/9/14	Y	N	N		-	DCD_12.02-27	5	3
		532	12.02-28	2010/4/9	Y	N	N		-	DCD_12.02-28	3	3
		532	12.02-29	2010/4/9	Y	Y	N		-		3	3
		532	12.02-29	2010/4/9	Y	Y	N		-	DCD_12.02-29	5	3
		532	12.02-29	7/10/2012	Y	N	N		-	DCD_12.02-29	3	4
		532	12.02-30	2010/4/9	Y	Y	N		-	DCD_12.02-30	3	3
		561	12.02-31	2010/4/9	N	N	N		-	-	N/A	N/A

Chapter:12

SRP Section		DCD RAI Response								Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status					
12.3-	Radiation Protection	90	12.03-12.04-1	2008/11/26	Y	N	N	fin.		-	DCD_12.03-12.04-1	0	2
12.4	Design Features	91	12.03-12.04-2	2009/1/9	Y	Y	N	fin.		-	DCD_12.03-12.04-2	0	2
		147	12.03-12.04-3	2009/2/6	Y	N	N			-	DCD_12.03-12.04-3	1	2
		147	12.03-12.04-4	2009/2/6	Y	N	N			-	DCD_12.03-12.04-4	1	2
		147	12.03-12.04-5	2009/2/6	Y	N	N			-	DCD_12.03-12.04-5	1	2
		170	12.03-12.04-6	2009/3/4	N	N	N			-	-	N/A	N/A
		171	12.03-12.04-7	2009/3/3	N	N	N			-	-	N/A	N/A
		171	12.03-12.04-8	2009/3/3	N	N	N			-	-	N/A	N/A
		171	12.03-12.04-9	2009/3/3	Y	N	N			-	DCD_12.03-12.04-9	-	2
		172	12.03-12.04-10	2009/3/3	Y	N	N			-	DCD_12.03-12.04-10	-	2
		173	12.03-12.04-11	2009/2/27	Y	N	N			-	DCD_12.03-12.04-11	1	2
		174	12.03-12.04-12	2009/2/27	Y	N	N			-	DCD_12.03-12.04-12	1	2
		262	12.03-12.04-13	2009/5/7	Y	N	N			-	DCD_12.03-12.04-13	3	2
		262	12.03-12.04-14	2009/5/7	Y	N	N			-	DCD_12.03-12.04-14	3	2
		262	12.03-12.04-15	2009/5/7	Y	N	N			-	DCD_12.03-12.04-15	3	2
		262	12.03-12.04-16	2009/5/7	N	N	N			-	-	N/A	N/A
		262	12.03-12.04-17	2009/5/7	Y	N	N			-	DCD_12.03-12.04-17	-	2
		262	12.03-12.04-18	2009/5/7	N	N	N			-	-	N/A	N/A
		262	12.03-12.04-19	2009/5/7	N	N	N			-	-	N/A	N/A
		262	12.03-12.04-20	2009/5/7	N	N	N			-	-	N/A	N/A
		425	12.03-12.04-21	2009/9/4	Y	N	N			-	DCD_12.03-12.04-21	0	3
		428	12.03-12.04-22	2009/9/28	N	N	N			-	-	N/A	N/A
		428	12.03-12.04-23	2009/9/28	N	N	N			-	-	N/A	N/A
		428	12.03-12.04-24	2009/9/28	N	N	N			-	-	N/A	N/A
		429	12.03-12.04-25	2009/9/28	Y	N	N			-	DCD_12.03-12.04-25	0	3
		429	12.03-12.04-26	2009/9/28	Y	Y	N			-	DCD_12.03-12.04-26	0	3
		429	12.03-12.04-27	2009/9/28	Y	N	N			-	DCD_12.03-12.04-27	0	3
		429	12.03-12.04-28	2009/9/28	N	N	N			-	-	N/A	N/A
		429	12.03-12.04-29	2009/9/28	N	N	N			-	-	N/A	N/A
		429	12.03-12.04-30	2009/9/28	Y	N	N			-	DCD_12.03-12.04-30	0	3
		429	12.03-12.04-31	2009/9/28	Y	N	N			-	DCD_12.03-12.04-31	0	3
		453	12.03-12.04-32	2009/9/16	N	N	N			-	-	N/A	N/A
		524	12.03-12.04-33	2010/3/12	N	N	N			-			
		524	12.03-12.04-33	2010/9/14	Y	Y	N			-	DCD_12.03-12.04-33	5	3
		524	12.03-12.04-34	2010/3/12	N	N	N			-	-	N/A	N/A
		524	12.03-12.04-34	2010/10/8	Y	Y	N			-	DCD_12.03-12.04-34	5	3
		524	12.03-12.04-35	2010/3/12	N	N	N			-			
		524	12.03-12.04-35	2010/9/14	Y	N	N			-	DCD_12.03-12.04-35	5	3
		524	12.03-12.04-36	2010/3/12	Y	N	N			-			
		524	12.03-12.04-36	2010/9/14	Y	N	N			-	DCD_12.03-12.04-36	5	3
		578	12.03-12.04-37	2010/7/30	Y	Y	N			-			
		578	12.03-12.04-37	2010/8/9	Y	Y	N			-	DCD_12.03-12.04-37	4	3
		578	12.03-12.04-37	8/30/2012	Y	Y	Y			-	DCD_12.03-12.04-37	3	4
		578	12.03-12.04-38	2010/7/30	Y	N	N			-	DCD_12.03-12.04-38		
		578	12.03-12.04-38	2010/8/9	Y	N	N			-	DCD_12.03-12.04-38	4	3
		578	12.03-12.04-38	8/30/2012	Y	Y	Y			-	DCD_12.03-12.04-38	3	4
		578	12.03-12.04-39	2010/7/30	Y	N	N			-	DCD_12.03-12.04-39		
		578	12.03-12.04-39	2010/8/9	Y	N	N			-	DCD_12.03-12.04-39	4	3
		895	12.03-12.04-40	04/25/2012	Y	N	N			-	DCD_12.03-12.04-40	3	4
		895	12.03-12.04-41	04/25/2012	Y	Y	Y			-	DCD_12.03-12.04-41	3	4

Chapter:12

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		895	12.03-12.04-42	04/25/2012	Y	N	N		-	DCD_12.03-12.04-42	3	4
		895	12.03-12.04-43	04/25/2012	Y	N	N		-	DCD_12.03-12.04-43	3	4
		895	12.03-12.04-44	04/25/2012	N	N	N		-	-	N/A	N/A
		895	12.03-12.04-45	04/25/2012	Y	N	N		-	DCD_12.03-12.04-45	3	4
		895	12.03-12.04-46	04/25/2012	Y	N	N		-	DCD_12.03-12.04-46	3	4
		895	12.03-12.04-47	04/25/2012	Y	N	N		-	DCD_12.03-12.04-47	3	4
		963	12.03-12.04-48	10/29/2012	Y	N	Y		-	DCD_12.03-12.04-48	4	4
		980	12.03-12.04-49	1/24/2013	Y	N	N		-	DCD_12.03-12.04-49	4	4
		1026	12.03-50	12/6/2013	Y	N	N		-	DCD_12.03-50	0	
		1026	12.03-51	12/6/2013	Y	N	N		-	DCD_12.03-51	0	
		1026	12.03-52	12/6/2013	N	N	N		-	-	N/A	N/A
		1026	12.03-53	12/6/2013	Y	N	N		-	DCD_12.03-53	0	
		1026	12.03-54	12/6/2013	Y	N	N		-	-	N/A	N/A
		1026	12.03-55	12/6/2013	N	N	N		-	-	N/A	N/A
		1027	12.03-56	12/6/2013	Y	N	N		-	DCD_12.03-56	0	
		1027	12.03-57	12/6/2013	N	N	N		-	-	N/A	N/A
		1027	12.03-58	12/6/2013	Y	N	N		-	DCD_12.03-58	0	
		1027	12.03-59	12/6/2013	N	N	N		-	-	N/A	N/A
		1027	12.03-60	12/6/2013	N	N	N		-	-	N/A	N/A
		1027	12.03-61	12/6/2014	N	N	N		-	-	N/A	N/A
		1027	12.03-62	12/6/2013	N	N	N		-	-	N/A	N/A
		1028	12.03-63	12/6/2013	Y	N	N		-	DCD_12.03-63	0	
		1028	12.03-64	12/6/2013	Y	N	N		-	DCD_12.03-64	0	
		1028	12.03-65	12/6/2013	Y	N	N		-	DCD_12.03-65	0	
		1028	12.03-66	12/6/2013	Y	N	N		-	DCD_12.03-66	0	
		1028	12.03-67	12/6/2013	Y	N	N		-	DCD_12.03-67	0	
		1028	12.03-68	12/6/2013	Y	N	N		-	DCD_12.03-68	0	
		1028	12.03-69	12/6/2013	N	N	N		-	-	N/A	N/A
		1065	12.03-70	12/26/2013	Y	N	N		-	DCD_12.03-70	0	
12.5	Operational Radiation											
	Protection Program											

Chapter:13

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
13.1.1	Management and											
	Technical Support Organization											
13.1.2-	Operating Organization											
13.1.3												
13.2.1	Reactor Operator	60	13.02.01-1	2008/9/25	Y	N	N	fin.	-	DCD_13.02.01-1	0	2
	Requalification Program;											
	Reactor Operator Training											
13.2.2	Non-Licensed Plant Staff Training											
13.3	Emergency Planning	46	13.03-1/13.3-1	2008/8/29	Y	N	N	fin.	-	DCD_13.03-1(1)	0	2
		46	13.03-1/13.3-2	2008/8/29	N	N	N	fin.	-	-	N/A	N/A
		46	13.03-1/13.3-3	2008/8/29	Y	N	N	fin.	-	DCD_13.03-1(3)	0	2
		108	13.03-2	2008/12/25	N	N	N	fin.	-	-	N/A	N/A
13.4	Operational Programs											
13.5.1.1	Administrative Procedures - General											
13.5.1.2	Administrative Procedures -											
	Initial Test Program											
13.5.2.1	Operating and Emergency	61	13.05.02.01-1	2008/9/25	Y	N	N	fin.	-	DCD_13.05.02-1	0	2
	Operating Procedures											

Chapter:13

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
13.6	Physical Security	282	13.06-1	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-3	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-4	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-5	2009/4/30	Y	N	N		-	DCD-13.06-5	3	2
		282	13.06-6	2009/5/15	Y	N	N		-	DCD-13.06-6	3	2
		282	13.06-7	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-8	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-9	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-10	2009/6/19	Y	N	N		-	DCD_13.06-10	3	2
		282	13.06-11	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-12	2009/4/30	Y	N	N		-	DCD-13.06-12	3	2
		282	13.06-13	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-14	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-15	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-16	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-17	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-18	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-19	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-20	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-21	2009/5/15	Y	Y	N		-	DCD-13.06-21	3	2
		282	13.06-22	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-23	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-24	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-25	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-26	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-27	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-28	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-29	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-30	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-31	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-32	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-33	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-34	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-35	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-36	2009/6/19	Y	N	N		-	DCD_13.06-36	3	2
		282	13.06-37	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-38	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-39	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-40	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-41	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-42	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-44	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-45	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-46	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-47	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-48	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-49	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-50	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-51	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-52	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-53	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-54	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-55	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-56	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-57	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-58	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-59	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-60	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-61	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-66	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-67	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-70	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-71	2009/5/15	N	N	N		-	-	N/A	N/A

Chapter:13

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		282	13.06-73	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-74	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-75	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-76	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-77	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-78	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-79	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-80	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-81	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-82	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-83	2009/6/19	N	N	N		-	-	N/A	N/A
		282	13.06-84	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-85	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-86	2009/6/1	N	N	N		-	-	N/A	N/A
		282	13.06-87	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-88	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-89	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-90	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-91	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-92	2009/4/30	N	N	N		-	-	N/A	N/A
		282	13.06-93	2009/5/15	N	N	N		-	-	N/A	N/A
		282	13.06-103	2009/6/19	N	N	N		-	-	N/A	N/A
		283	13.06.02-6	2009/6/19	N	N	N		-	-	N/A	N/A
		283	13.06.02-7	2009/6/19	N	N	N		-	-	N/A	N/A
		613	13.06.02-19	10/20/2010	Y	N			-	DCD_13.06.02-19	6	3
		613	13.06.02-20	10/20/2010	Y	N			-	DCD_13.06.02-20	6	3
		613	13.06.02-20	03/14/2011	Y	N	N		-	DCD_13.06.02-20	-	3
		613	13.06.02-21	10/20/2010	Y	N			-	DCD_13.06.02-21	6	3
		613	13.06.02-22	10/20/2010	Y	N			-	DCD_13.06.02-22	6	3
		613	13.06.02-23	10/20/2010	Y	N			-	DCD_13.06.02-23	6	3
		613	13.06.02-24	10/20/2010	Y	N			-	DCD_13.06.02-24	6	3
		613	13.06.02-25	10/20/2010	Y	N			-	DCD_13.06.02-25	6	3
		613	13.06.02-26	10/20/2010	Y	N			-	DCD_13.06.02-26	6	3
13.7	Fitness for Duty											
App.13AA	Design, Construction and Pre-operational Activities											

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.2	Initial Plant Test Program -	7	14.02-1	2008/6/27	Y	N	N	fin.	-	DCD_14.02-1	-	1
	Design Certification and	12	14.02-2	2008/7/18	Y	N	N	fin.	-	DCD_14.02-2	-	1
	New License Applicants	12	14.02-3	2008/7/18	Y	N	N	fin.	-	DCD_14.02-3	-	1
		12	14.02-4	2008/7/18	Y	N	N	fin.	-	DCD_14.02-4	-	1
		12	14.02-5	2008/7/18	Y	N	N	fin.	-	DCD_14.02-5	-	1
		12	14.02-6	2008/7/18	N	N	N	fin.	-	-	N/A	N/A
		12	14.02-7	2008/7/18	Y	N	N	fin.	-	DCD_14.02-7	-	1
		27	14.02-8	2008/7/31	Y	Y	N	fin.	-	DCD_14.02-8	0	2
		27	14.02-9	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		28	14.02-10	2008/7/31	Y	N	N	fin.	-	DCD_14.02-10	-	1
		28	14.02-11	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		28	14.02-12	2008/7/31	Y	N	N	fin.	-	DCD_14.02-12	-	1
		28	14.02-13	2008/7/31	Y	N	N	fin.	-	DCD_14.02-13	-	1
		28	14.02-14	2008/7/31	Y	N	N	fin.	-	DCD_14.02-14	-	1
		28	14.02-15	2008/7/31	Y	N	N	fin.	-	DCD_14.02-15	-	1
		28	14.02-16	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		28	14.02-17	2008/7/31	Y	N	N	fin.	-	DCD_14.02-17	-	1
		28	14.02-18	2008/7/31	Y	N	N	fin.	-	DCD_14.02-18	-	1
		28	14.02-19	2008/7/31	Y	N	N	fin.	-	DCD_14.02-19	0	2
		28	14.02-20	2008/7/31	Y	N	N	fin.	-	DCD_14.02-20	-	1
		28	14.02-21	2008/7/31	N	N	N	fin.	-	-	N/A	N/A
		28	14.02-22	2008/7/31	Y	N	N	fin.	-	DCD_14.02-22	-	1
		31	14.02-23	2008/8/29	Y	Y	N	fin.	-	DCD_14.02-23	0	2
		31	14.02-24	2008/8/29	Y	N	N	fin.	-	DCD_14.02-24	0	2
		33	14.02-25	2008/9/4	Y	N	N	fin.	-	DCD_14.02-25	0	2
		33	14.02-26	2008/9/4	Y	N	N	fin.	-	DCD_14.02-26	0	2
		33	14.02-27	2008/9/4	Y	N	N	fin.	-	DCD_14.02-27	0	2
		33	14.02-28	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-29	2008/9/4	Y	N	N	fin.	-	DCD_14.02-29	0	2
		33	14.02-30	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-31	2008/9/4	Y	N	N	fin.	-	DCD_14.02-31	0	2
		33	14.02-32	2008/9/4	Y	N	N	fin.	-	DCD_14.02-32	0	2
		33	14.02-33	2008/9/4	Y	N	N	fin.	-	DCD_14.02-33	0	2
		33	14.02-34	2008/9/4	Y	N	N	fin.	-	DCD_14.02-34	0	2
		33	14.02-35	2008/9/4	Y	N	N	fin.	-	DCD_14.02-35	0	2
		33	14.02-36	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-37	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-38	2008/9/4	N	N	N	fin.	-	DCD_14.02-38	0	1
		33	14.02-39	2008/9/4	Y	N	N	fin.	-	DCD_14.02-39	0	2
		33	14.02-40	2008/9/4	Y	N	N	fin.	-	DCD_14.02-40	0	2
		33	14.02-41	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-42	2008/9/4	Y	N	N	fin.	-	DCD_14.02-42	0	2
		33	14.02-43	2008/9/4	Y	N	N	fin.	-	DCD_14.02-43	0	2
		33	14.02-44	2008/9/4	Y	N	N	fin.	-	DCD_14.02-44	0	2
		33	14.02-45	2008/9/4	Y	N	N	fin.	-	DCD_14.02-45	0	2
		33	14.02-46	2008/9/4	Y	N	N	fin.	-	DCD_14.02-46	0	2
		33	14.02-47	2008/9/4	Y	N	N	fin.	-	DCD_14.02-47	0	2
		33	14.02-48	2008/9/4	Y	N	N	fin.	-	DCD_14.02-48	0	2
		33	14.02-49	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-50	2008/9/4	Y	N	N	fin.	-	DCD_14.02-50	0	2
		33	14.02-51	2008/9/4	Y	N	N	fin.	-	DCD_14.02-51	0	2
		33	14.02-52	2008/9/4	N	N	N	fin.	-	DCD_14.02-52	N/A	N/A
		33	14.02-53	2008/9/4	Y	N	N	fin.	-	DCD_14.02-53	0	2
		33	14.02-54	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-55	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-56	2008/9/4	Y	N	N	fin.	-	DCD_14.02-56	0	2
		33	14.02-57	2008/9/4	Y	N	N	fin.	-	DCD_14.02-57	0	2
		33	14.02-58	2008/9/4	Y	N	N	fin.	-	DCD_14.02-58	0	2
		33	14.02-59	2008/9/4	Y	N	N	fin.	-	DCD_14.02-59	0	2
		33	14.02-60	2008/9/4	Y	N	N	fin.	-	DCD_14.02-60	0	2
		33	14.02-61	2008/9/4	Y	N	N	fin.	-	DCD_14.02-61	0	2
		33	14.02-62	2008/9/4	Y	N	N	fin.	-	DCD_14.02-62	0	2
		33	14.02-63	2008/9/4	N	N	N	fin.	-	-	N/A	N/A

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		33	14.02-64	2008/9/4	Y	N	N	fin.	-	DCD_14.02-64	0	2
		33	14.02-65	2008/9/4	Y	N	N	fin.	-	DCD_14.02-65	0	2
		33	14.02-66	2008/9/4	Y	N	N	fin.	-	DCD_14.02-66	0	2
		33	14.02-67	2008/9/4	Y	N	N	fin.	-	DCD_14.02-67	0	2
		33	14.02-68	2008/9/4	Y	N	N	fin.	-	DCD_14.02-68	0	2
		33	14.02-69	2008/9/4	Y	N	N	fin.	-	DCD_14.02-69	0	2
		33	14.02-70	2008/9/4	Y	N	N	fin.	-	DCD_14.02-70	0	2
		33	14.02-71	2008/9/4	Y	N	N	fin.	-	DCD_14.02-71	0	2
		33	14.02-72	2008/9/4	Y	N	N	fin.	-	DCD_14.02-72	0	2
		33	14.02-73	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-74	2008/9/4	Y	N	N	fin.	-	DCD_14.02-74	0	2
		33	14.02-75	2008/9/4	Y	N	N	fin.	-	DCD_14.02-75	0	2
		33	14.02-76	2008/9/4	Y	N	N	fin.	-	DCD_14.02-76	0	2
		33	14.02-77	2008/9/4	Y	N	N	fin.	-	DCD_14.02-77	0	2
		33	14.02-78	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-79	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-80	2008/9/4	Y	N	N	fin.	-	DCD_14.02-80	0	2
		33	14.02-81	2008/9/4	N	N	N	fin.	-	-	N/A	N/A
		33	14.02-82	2008/9/4	Y	N	N	fin.	-	DCD_14.02-82	0	2
		33	14.02-83	2008/9/4	Y	N	N	fin.	-	DCD_14.02-83	0	2
		33	14.02-84	2008/9/4	Y	N	N	fin.	-	DCD_14.02-84	0	2
		33	14.02-85	2008/9/4	Y	N	N	fin.	-	DCD_14.02-85	0	2
		58	14.02-86	2008/9/18	Y	N	N	fin.	-	DCD_14.02-86	0	2
		70	14.02-87	2008/9/25	Y	N	N	fin.	-			
		70	14.02-87	2009/3/30	Y	Y	N	fin.		DCD_14.02-87	1	2
		78	14.02-88	2008/10/16	Y	N	N	fin.	-	DCD_14.02-88	0	2
		78	14.02-89	2008/10/16	Y	N	N	fin.	-	DCD_14.02-89	0	2
		93	14.02-90	2008/12/5	Y	Y	N	fin.	-	DCD_14.02-90	0	2
		102	14.02-91	2008/12/18	N	N	N	fin.	-	-	N/A	N/A
		102	14.02-92	2008/12/18	Y	N	N	fin.	-	DCD_14.02-92	0	2
		102	14.02-93	2008/12/18	Y	N	N	fin.	-	DCD_14.02-93	0	2
		102	14.02-94	2008/12/18	Y	N	N	fin.	-	DCD_14.02-94	0	2
		102	14.02-95	2008/12/18	N	N	N	fin.	-	-	N/A	N/A
		102	14.02-96	2008/12/18	Y	N	N	fin.	-	DCD_14.02-96	0	2
		102	14.02-97	2008/12/18	Y	N	N	fin.	-	DCD_14.02-97	0	2
		102	14.02-98	2008/12/18	Y	N	N	fin.	-	DCD_14.02-98	0	2
		102	14.02-99	2008/12/18	Y	N	N	fin.	-	DCD_14.02-99	0	2
		102	14.02-100	2008/12/18	Y	N	N	fin.	-	DCD_14.02-100	0	2
		102	14.02-101	2008/12/18	Y	N	N	fin.	-	DCD_14.02-101	0	2
		102	14.02-102	2008/12/18	Y	N	N	fin.	-	DCD_14.02-102	0	2
		102	14.02-103	2008/12/18	Y	N	N	fin.	-	DCD_14.02-103	0	2
		102	14.02-104	2008/12/18	Y	N	N	fin.	-	DCD_14.02-104	0	2
		102	14.02-105	2008/12/18	N	N	N	fin.	-	-	N/A	N/A
		102	14.02-106	2008/12/18	Y	N	N	fin.	-	DCD_14.02-106	0	2
		123	14.02-107	2008/12/18	Y	N	N	fin.	-	DCD_14.02-107	0	2
		194	14.02-108	2009/2/24	Y	N	N		-			
		194	14.02-108	2009/4/1	Y	N	N		-	DCD_14.02-108	2	2
		243	14.02-109	2009/3/27	Y	Y	N	fin.	-	DCD_14.02-109	1	2
		243	14.02-110	2009/3/27	Y	N	N	fin.	-	DCD_14.02-110	1	2
		243	14.02-111	2009/3/27	Y	N	N	fin.	-	DCD_14.02-111	1	2
		243	14.02-112	2009/3/27	Y	Y	N	fin.	-	DCD_14.02-112	1	2
		271	14.02-113	2009/3/30	Y	Y	N	fin.	-	DCD_14.02-113	3	2
		271	14.02-114	2009/3/30	Y	Y	N	fin.	-	DCD_14.02-114	1	2
		337	14.02-115	2009/5/18	Y	N	N		-	DCD_14.02-115	2	2
		337	14.02-116	2009/5/18	Y	Y	N		-	DCD_14.02-116	2	2
		371	14.02-117	2009/6/17	Y	N	N		-	DCD_14.02-117	3	2
		409	14.02-118	2009/7/10	Y	N	N		-	DCD_14.02-118	3	2
		-	-	-	-	-	-	-	COL 14.2(3) deleted	MAP-14-001	0	2
		455	14.02-119	2009/10/1	Y	N	N		-	DCD_14.02-119	-	2
		521	14.02-120	2010/2/5	Y	Y	N		-	DCD_14.02-120	2	3

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		554	14.02-121	2010/4/15	Y	N	N		-	DCD_14.02-121	3	3
		600	14.02-122	2010/7/20	Y	Y	N		-	DCD_14.02-122	4	3
		678	14.02-123	2011/3/1	Y	N	N		-	DCD_14.02-123	0	4
		739	14.02-124	2011/6/7	N	N	N		-	-	N/A	N/A
		759	14.02-125	2011/7/20	Y	N	N		-	DCD_14.02-125	1	4
14.3	Inspections, Tests, Analyses,	32	14.03-1	2008/8/29	Y	Y	N	fin.	-	DCD_14.03-1	0	2
	and Acceptance Criteria	32	14.03-2	2008/8/29	N	N	N	fin.	-	-	N/A	N/A
		32	14.03-3	2008/8/29	N	N	N	fin.	-	-	N/A	N/A
		32	14.03-4	2008/8/29	Y	Y	N	fin.	-	DCD_14.03-4	-	2
		32	14.03-5	2008/8/29	N	N	N	fin.	-	-	N/A	N/A
		156	14.3-1	2009/2/5	Y	N	N	fin.	-	DCD_14.3-1	1	2
				2011/6/7	N	N	N		-	-	N/A	N/A
		156	14.3-2	2009/2/5	Y	N	N	fin.	-	DCD_14.3-2	1	2
		945	14.03-3	9/18/2012	N	N	N		-	-	N/A	N/A
		945	14.03-4	9/18/2012	N	N	N		-	-	N/A	N/A
		945	14.03-5	9/18/2012	Y	N	N		-	DCD_14.03-5	3	4
		945	14.03-5	4/3/2013	Y	N	N		-	DCD_14.03-5	-	4
		945	14.03-6	9/18/2012	Y	N	N		-	DCD_14.03-6	3	4
		945	14.03-6	4/3/2013	Y	N	N		-	DCD_14.03-6	4	4
		945	14.03-7	9/18/2012	Y	N	N		-	DCD_14.03-7	3	4
		945	14.03-7	4/3/2013	Y	N	N		-	DCD_14.03-7	4	4
		945	14.03-8	9/18/2012	Y	N	N		-	DCD_14.03-8	3	4
		945	14.03-8	4/3/2013	Y	N	N		-	DCD_14.03-8	3	4
		945	14.03-8	6/7/2013	Y	N	-		-	DCD_14.03-8	5	4
		945	14.03-9	9/18/2012	Y	N	N		-	DCD_14.03-9	3	4
		945	14.03-9	6/4/2013	Y	N	-		-	DCD_14.03-9	5	4
		945	14.03-10	9/18/2012	Y	N	N		-	DCD_14.03-10	3	4
		945	14.03-11	9/18/2012	Y	N	N		-	DCD_14.03-11	3	4
		945	14.03-11	4/3/2013	Y	N	N		-	DCD_14.03-11	3	4
		945	14.03-11	6/7/2013	Y	N	-		-	DCD_14.03-11	5	4
		945	14.03-12	9/18/2012	Y	N	N		-	-	N/A	N/A
		945	14.03-13	9/18/2012	Y	N	N		-	DCD_14.03-13	3	4
14.3.2	Structural and Systems Engineering	190	14.03.02-2	2009/3/3	Y	N	N		-	DCD_14.03.02-2	2	2
	Inspections, Tests, Analyses,	190	14.03.02-3	2009/3/3	Y	N	N		-	DCD_14.03.02-3	2	2
	and Acceptance Criteria	190	14.03.02-4	2009/3/3	N	N	N		-	-	N/A	N/A
		190	14.03.02-5	2009/3/3	Y	N	N		-	DCD_14.03.02-5	-	2
		190	14.03.02-6	2009/3/3	Y	N	N		-	DCD_14.03.02-6	2	2
		190	14.03.02-7	2009/3/3	Y	N	N		-	DCD_14.03.02-7	2	2
		190	14.03.02-8	2009/3/3	Y	N	N		-	DCD_14.03.02-8	2	2
		452	14.03.02-9	2009/10/1	Y	N	N		-	DCD_14.03.02-9	-	2
		452	14.03.02-10	2009/10/1	Y	N	N		-	DCD_14.03.02-10	-	2
		452	14.03.02-11	2009/10/1	Y	N	N		-	DCD_14.03.02-11	-	2
		452	14.03.02-12	2009/10/1	Y	N	N		-	DCD_14.03.02-12	-	2
		452	14.03.02-13	2009/10/8	Y	N	N		-	DCD_14.03.02-13	-	2
		452	14.03.02-14	2009/10/1	Y	N	N		-	DCD_14.03.02-14	-	2
		596	14.03.02-15	2010/7/5	Y	N	N		-	DCD_14.03.02-15	4	3
		596	14.03.02-16	2010/7/5	Y	N	N		-	DCD_14.03.02-16	4	3
		596	14.03.02-17	2010/7/5	Y	N	N		-	DCD_14.03.02-17	4	3
		596	14.03.02-18	2010/7/5	Y	N	N		-	DCD_14.03.02-18	4	3
		596	14.03.02-19	2010/7/5	Y	N	N		-	DCD_14.03.02-19	4	3
		934	14.03.02-20	6/28/2012	Y	N	N		-	DCD_14.03.02-20	3	4
		934	14.03.02-21	6/28/2012	Y	N	N		-	DCD_14.03.02-21	3	4
		934	14.03.02-22	6/28/2012	Y	N	N		-	DCD_14.03.02-22	3	4
		934	14.03.02-23	6/28/2012	Y	N	N		-	DCD_14.03.02-23	3	4
		934	14.03.02-24	6/28/2012	Y	N	N		-	DCD_14.03.02-24	3	4

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.3.3	Piping Systems and Components	242	14.03.03-1	2009/4/27	N	N	N		-	-	N/A	N/A
	and Acceptance Criteria	242	14.03.03-2	2009/4/27	N	N	N		-	-	N/A	N/A
		242	14.03.03-3	2009/4/27	Y	N	N		-	DCD_14.03.03-3	3	2
		242	14.03.03-4	2009/4/27	Y	N	N		-	DCD_14.03.03-4	2	2
		242	14.03.03-5	2009/4/27	Y	N	N		-	DCD_14.03.03-5	3	2
		242	14.03.03-6	2009/4/27	Y	N	N		-	DCD_14.03.03-6	3	2
		242	14.03.03-7	2009/4/27	Y	N	N		-	DCD_14.03.03-7	3	2
		242	14.03.03-8	2009/4/27	Y	N	N		-	DCD_14.03.03-8	3	2
		242	14.03.03-9	2009/4/27	Y	N	N		-	DCD_14.03.03-9	3	2
		242	14.03.03-10	2009/4/27	Y	N	N		-	DCD_14.03.03-10	3	2
		242	14.03.03-11	2009/4/27	Y	N	N		-	DCD_14.03.03-11	3	2
		242	14.03.03-12	2009/4/27	Y	N	N		-	DCD_14.03.03-12	3	2
		242	14.03.03-13	2009/4/27	Y	N	N		-	DCD_14.03.03-13	3	2
		242	14.03.03-14	2009/4/27	Y	N	N		-	DCD_14.03.03-14	3	2
		242	14.03.03-15	2009/4/27	Y	N	N		-	DCD_14.03.03-15	3	2
				2011/6/7	N	N	N		-	-	N/A	N/A
		242	14.03.03-16	2009/4/27	Y	N	N		-	DCD_14.03.03-16	3	2
				2011/6/7	N	N	N		-	-	N/A	N/A
		242	14.03.03-16	12/17/2012	Y	N	N		-	DCD_14.03.03-16	3	4
		404	14.03.03-17	2009/7/31	Y	N	N		-	DCD_14.03.03-17	4	2
		404	14.03.03-18	2009/7/31	Y	N	N		-	DCD_14.03.03-18	4	2
		404	14.03.03-19	2009/7/31	Y	N	N		-	DCD_14.03.03-19	4	2
		404	14.03.03-20	2009/7/31	Y	N	N		-	DCD_14.03.03-20	4	2
		404	14.03.03-21	2009/7/31	Y	N	N		-	DCD_14.03.03-21	4	2
		404	14.03.03-22	2009/7/31	Y	N	N		-	DCD_14.03.03-22	4	2
		499	14.03.03-23	2009/12/16	Y	N	N		-	DCD_14.03.03-23	1	3
		743	14.03.03-24	2011/5/26	Y	N	N		-	DCD_14.03.03-24	0	4
		743	14.03.03-25	2011/5/26	N	N	N		-	-	N/A	N/A
		892	14.03.03-26	02/17/2012	Y	N	N		-	DCD_03.03-26	2	4
		892	14.03.03-26	7/25/2012	Y	N	N			DCD_03.03-26	3	4
		892	14.03.03-27	02/17/2012	Y	Y	Y		-	DCD_03.03-27	2	4
		892	14.03.03-27	10/25/2012	Y	Y	Y		-	DCD_03.03-27	3	4
		935	14.03.03-28	6/28/2012	Y	N	N		-	DCD_03.03-28	3	4
		935	14.03.03-28	12/12/2012	Y	N	N		-	DCD_03.03-28	3	4
14.3.4	Reactor Systems -	191	14.03.04-1	2009/4/7	Y	N	N		-	DCD_14.03.04-1	3	2
		191	14.03.04-2	2009/4/7	Y	N	N		-	DCD_14.03.04-2	3	2
		191	14.03.04-3	2009/4/7	Y	N	N		-	DCD_14.03.04-3	3	2
		191	14.03.04-4	2009/4/7	Y	N	N		-	DCD_14.03.04-4	3	2
		191	14.03.04-5	2009/4/7	Y	N	N		-	DCD_14.03.04-5	2	2
		191	14.03.04-6	2009/4/7	Y	N	N		-	DCD_14.03.04-6	3	2
		191	14.03.04-7	2009/4/7	Y	N	N		-	DCD_14.03.04-7	3	2
		191	14.03.04-8	2009/4/7	Y	N	N		-	DCD_14.03.04-8	3	2
		191	14.03.04-9	2009/4/7	Y	N	N		-	DCD_14.03.04-9	3	2
		192	14.03.04-10	2009/4/10	Y	N	N		-	DCD_14.03.04-10	3	2
		192	14.03.04-11	2009/4/10	Y	N	N		-	DCD_14.03.04-11	3	2
		192	14.03.04-12	2009/4/10	Y	N	N		-	DCD_14.03.04-12	3	2
		192	14.03.04-13	2009/4/10	Y	N	N		-	DCD_14.03.04-13	3	2
		192	14.03.04-14	2009/4/10	Y	N	N		-	DCD_14.03.04-14	3	2
		192	14.03.04-15	2009/4/10	Y	N	N		-	DCD_14.03.04-15	3	2
		192	14.03.04-16	2009/4/10	Y	N	N		-	DCD_14.03.04-16	3	2
		192	14.03.04-17	2009/4/10	Y	N	N		-	DCD_14.03.04-17	3	2
		192	14.03.04-18	2009/4/10	Y	N	N		-	DCD_14.03.04-18	3	2

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		193	14.03.04-19	2009/4/9	Y	N	N		-	DCD-14.03.04-19	3	2
		193	14.03.04-20	2009/4/9	Y	N	N		-	DCD-14.03.04-20	3	2
		193	14.03.04-21	2009/4/9	Y	N	N		-	DCD-14.03.04-21	3	2
		193	14.03.04-22	2009/4/9	Y	N	N		-	DCD-14.03.04-22	3	2
		193	14.03.04-23	2009/4/9	Y	N	N		-	DCD-14.03.04-23	3	2
		193	14.03.04-24	2009/4/9	Y	N	N		-	DCD-14.03.04-24	3	2
		193	14.03.04-25	2009/4/9	Y	N	N		-	DCD-14.03.04-25	3	2
		193	14.03.04-26	2009/4/9	Y	N	N		-	DCD-14.03.04-26	3	2
		193	14.03.04-27	2009/4/9	Y	N	N		-	DCD-14.03.04-27	3	2
		193	14.03.04-28	2009/4/9	Y	N	N		-	DCD-14.03.04-28	3	2
		193	14.03.04-29	2009/4/9	Y	N	N		-	DCD-14.03.04-29	3	2
		193	14.03.04-30	2009/4/9	Y	N	N		-	DCD-14.03.04-30	3	2
		196	14.03.04-31	2009/3/5	Y	N	N		-	DCD_14.03.04-31	2	2
		196	14.03.04-32	2009/3/5	Y	N	N		-	DCD_14.03.04-32	2	2
		196	14.03.04-33	2009/3/5	Y	N	N		-	DCD_14.03.04-33	2	2
		196	14.03.04-34	2009/3/5	Y	N	N		-	DCD_14.03.04-34	2	2
		196	14.03.04-35	2009/3/5	Y	N	N		-	DCD_14.03.04-35	2	2
		373	14.03.04-36	2009/6/16	N	N	N		-	-	N/A	N/A
		373	14.03.04-37	2009/6/16	N	N	N		-	-	N/A	N/A
		373	14.03.04-38	2009/6/16	N	N	N		-	-	N/A	N/A
		373	14.03.04-39	2009/6/16	N	N	N		-	-	N/A	N/A
		373	14.03.04-39	2012/5/31	N	N	N		-	-	N/A	N/A
		373	14.03.04-40	2009/6/16	N	N	N		-	-	N/A	N/A
		446	14.03.04-41	2009/9/28	Y	N	N		-	DCD_14.03.04-41	-	2
		503	14.03.04-42	2009/12/21	Y	N	N		-	DCD_14.03.04-42	1	3
		941	14.03.04-43	9/5/2012	Y	N	N		-	DCD_14.03.04-43	3	4
		941	14.03.04-44	9/5/2012	Y	N	N		-	DCD_14.03.04-44	3	4
		941	14.03.04-45	9/5/2012	N	N	N		-	-	N/A	N/A
		941	14.03.04-45	6/26/2013	N	N	N				N/A	N/A
		941	14.03.04-45	11/8/2013	N	N	N				N/A	N/A
		941	14.03.04-46	9/5/2012	N	N	N		-	-	N/A	N/A
		941	14.03.04-46	6/26/2013	N	N	N				N/A	N/A
		941	14.03.04-46	11/8/2013	N	N	N				N/A	N/A
		941	14.03.04-47	9/5/2012	N	N	N		-	-	N/A	N/A
		941	14.03.04-48	9/5/2012	Y	N	N		-	DCD_14.03.04-48	3	4
		941	14.03.04-48	6/26/2013	Y	N	N			DCD_14.03.04-48	5	4
		941	14.03.04-49	9/5/2012	Y	N	N		-	DCD_14.03.04-49	3	4
		941	14.03.04-50	9/5/2012	Y	N	N		-	DCD_14.03.04-50	3	4
		941	14.03.04-51	9/5/2012	Y	N	N		-	DCD_14.03.04-51	3	4
		941	14.03.04-52	9/5/2012	Y	N	N		-	DCD_14.03.04-52	3	4
		941	14.03.04-52	6/26/2013	Y	N	N			DCD_14.03.04-52	5	4
		941	14.03.04-53	9/5/2012	Y	N	N		-	DCD_14.03.04-53	3	4
		941	14.03.04-54	9/5/2012	N	N	N		-	-	N/A	N/A
		941	14.03.04-55	9/5/2012	Y	N	N		-	-	N/A	N/A

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.3.5	Instrumentation and Controls -	181	14.03.05-1	2009/4/6	N	N	N		-	-	N/A	N/A
		181	14.03.05-2	2009/4/6	N	N	N		-	-	N/A	N/A
		181	14.03.05-3	2009/4/6	Y	N	N		-	DCD-14.03.05-3	3	2
		181	14.03.05-4	2009/4/6	Y	Y	N		-	DCD-14.03.05-4	3	2
		181	14.03.05-5	2009/4/6	Y	N	N		-	DCD-14.03.05-5	3	2
		181	14.03.05-6	2009/4/6	Y	N	N		-	DCD-14.03.05-6	3	2
		181	14.03.05-7	2009/4/6	N	N	N		-	-	N/A	
		181	14.03.05-8	2009/4/6	Y	N	N		-	DCD-14.03.05-8	3	2
		181	14.03.05-9	2009/4/6	Y	N	N		-	DCD-14.03.05-9	3	2
		255	14.03.05-10	2009/4/28	Y	N	N		-	DCD-14.03.05-10	3	2
		255	14.03.05-11	2009/4/28	Y	N	N		-	DCD-14.03.05-11	3	2
		255	14.03.05-11	2011/6/7	N	N	N		-	-	N/A	N/A
		255	14.03.05-12	2009/4/28	Y	N	N		-	DCD-14.03.05-12	3	2
		255	14.03.05-12	5/31/2011	Y	N	N		-	DCD_14.03.05-12	0	4
		255	14.03.05-13	2009/4/28	Y	N	N		-	DCD-14.03.05-13	3	2
		255	14.03.05-14	2009/4/28	Y	N	N		-	DCD-14.03.05-14	3	2
		255	14.03.05-15	2009/4/28	Y	N	N		-	DCD-14.03.05-15	3	2
		255	14.03.05-16	2009/4/28	Y	N	N		-	DCD-14.03.05-16	3	2
		255	14.03.05-17	2009/4/28	Y	N	N		-	DCD-14.03.05-17	3	2
		255	14.03.05-18	2009/4/28	Y	N	N		-	DCD-14.03.05-18	3	2
		255	14.03.05-19	2009/4/28	Y	N	N		-	DCD-14.03.05-19	3	2
		255	14.03.05-20	2009/4/28	Y	N	N		-	DCD-14.03.05-20	3	2
		255	14.03.05-21	2009/4/28	Y	N	N		-	DCD-14.03.05-21	3	2
		275	14.03.05-22	2009/4/28	Y	N	N		-	DCD-14.03.05-22	3	2
		275	14.03.05-23	2009/4/28	Y	N	N		-	DCD-14.03.05-23	3	2
		275	14.03.05-24	2009/4/28	Y	N	N		-	DCD-14.03.05-24	3	2
		275	14.03.05-25	2009/4/28	Y	N	N		-	DCD-14.03.05-25	3	2
		275	14.03.05-26	2009/4/28	Y	N	N		-	DCD-14.03.05-26	3	2
		275	14.03.05-27	2009/4/28	-	N	N		-	-	N/A	N/A
		275	14.03.05-28	2009/4/28	Y	N	N		-	DCD-14.03.05-28	3	2
		275	14.03.05-29	2009/4/28	Y	N	N		-	DCD-14.03.05-29	3	2
		275	14.03.05-30	2009/4/28	N	N	N		-	-	N/A	N/A
		275	14.03.05-31	2009/4/28	N	N	N		-	-	N/A	N/A
		275	14.03.05-31	5/31/2011	Y	N	N		-	DCD_14.03.05-31	0	4
		515	14.03.05-32	2010/1/28	Y	N	N		-	DCD_14.03.05-32	2	3
		936	14.03.05-33	8/24/2012	Y	N	N		-	DCD_14.03.05-33	3	4
		936	14.03.05-34	8/24/2012	Y	N	N		-	DCD_14.03.05-34	3	4
		936	14.03.05-35	8/24/2012	Y	N	N		-	DCD_14.03.05-35	3	4
		936	14.03.05-36	8/24/2012	Y	N	N		-	DCD_14.03.05-36	3	4
		936	14.03.05-37	8/24/2012	Y	N	N		-	DCD_14.03.05-37	3	4
		936	14.03.05-38	8/24/2012	Y	N	N		-	DCD_14.03.05-38	3	4
		936	14.03.05-39	8/24/2012	Y	N	N		-	DCD_14.03.05-39	3	4
		936	14.03.05-40	8/24/2012	Y	N	N		-	DCD_14.03.05-40	3	4
		936	14.03.05-40	4/18/2013	Y	N	N		-	DCD_14.03.05-40	4	4
		936	14.03.05-41	8/24/2012	Y	N	N		-	DCD_14.03.05-41	3	4
		936	14.03.05-42	8/24/2012	Y	N	N		-	DCD_14.03.05-42	3	4
		936	14.03.05-43	8/24/2012	Y	N	N		-	DCD_14.03.05-43	3	4
		936	14.03.05-44	8/24/2012	Y	N	N		-	DCD_14.03.05-44	3	4
		936	14.03.05-44	4/18//2013	Y	N	N		-	DCD_14.03.05-44	4	4
		936	14.03.05-45	8/24/2012	Y	N	N		-	DCD_14.03.05-45	3	4
		936	14.03.05-45	4/18/2013	Y	N	N		-	DCD_14.03.05-45	4	4
		936	14.03.05-46	8/24/2012	Y	N	N		-	DCD_14.03.05-46	3	4
		936	14.03.05-47	8/24/2012	Y	N	N		-	DCD_14.03.05-47	3	4
		936	14.03.05-48	8/24/2012	Y	N	N		-	DCD_14.03.05-48	3	4
		936	14.03.05-49	8/24/2012	Y	N	N		-	DCD_14.03.05-49	3	4
		936	14.03.05-49	7/19/2013	Y	N			-	DCD_14.03.05-49	-	4
		936	14.03.05-50	8/24/2012	Y	N	N		-	DCD_14.03.05-50	3	4
		936	14.03.05-50	4/18/2013	Y	N	N		-	DCD_14.03.05-50	4	4
		936	14.03.05-51	8/24/2012	Y	N	N		-	DCD_14.03.05-51	3	4

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.3.6	Electrical Systems -	182	14.03.06-06	2009/4/6	Y	N	N		-	DCD-14.03.06-06	3	2
	Inspections, Tests, Analyses,	182	14.03.06-07	2009/4/6	Y	N	N		-	DCD-14.03.06-07	3	2
	and Acceptance Criteria	182	14.03.06-08	2009/4/6	Y	N	N		-	DCD-14.03.06-08	3	2
		182	14.03.06-09	2009/4/6	Y	N	N		-	DCD-14.03.06-09	3	2
		182	14.03.06-10	2009/4/6	Y	N	N		-	DCD-14.03.06-10	3	2
		182	14.03.06-11	2009/4/6	Y	N	N		-	DCD-14.03.06-11	3	2
		182	14.03.06-12	2009/4/6	Y	N	N		-	DCD-14.03.06-12	3	2
		182	14.03.06-13	2009/4/6	Y	N	N		-	DCD-14.03.06-13	3	2
		182	14.03.06-14	2009/4/6	Y	N	N		-	DCD-14.03.06-14	3	2
		424	14.03.06-15	2009/9/8	Y	Y	N		-	DCD-14.03.06-15	-	2
		424	14.03.06-16	2009/9/8	Y	Y	N		-	DCD-14.03.06-16	4	2
		424	14.03.06-17	2009/9/8	Y	N	N		-	DCD-14.03.06-17	-	2
		424	14.03.06-17	2011/6/7	N	N	N		-	-	N/A	N/A
		424	14.03.06-18	2009/9/8	Y	N	N		-	DCD-14.03.06-18	-	2
		651	14.03.06-19	2011/2/17	N	N	N		-	-	N/A	N/A
		754	14.03.06-20	2011/7/15	Y	N	N		-	DCD_14.03.06-20	1	4
		754	14.03.06-21	2011/7/15	N	N	N		-	-	N/A	N/A
		754	14.03.06-22	2011/7/15	Y	N	N		-	DCD_14.03.06-22	1	4
		754	14.03.06-23	2011/7/15	Y	N	N		-	DCD_14.03.06-23	1	4
		754	14.03.06-24	2011/7/15	Y	N	N		-	DCD_14.03.06-24	1	4
		754	14.03.06-25	2011/7/15	Y	N	N		-	DCD_14.03.06-25	1	4
		754	14.03.06-26	2011/7/15	Y	N	N		-	DCD_14.03.06-26	1	4
		754	14.03.06-27	2011/7/15	N	N	N		-	-	N/A	N/A
		754	14.03.06-28	2011/7/15	Y	N	N		-	DCD_14.03.06-28	1	4
		946	14.03.06-29	8/16/2012	Y	N	N		-	DCD_14.03.06-29	3	4
		946	14.03.06-30	8/16/2012	Y	N	N		-	DCD_14.03.06-30	3	4
		946	14.03.06-31	8/16/2012	Y	N	N		-	DCD_14.03.06-31	3	4
		946	14.03.06-32	8/16/2012	Y	N	N		-	DCD_14.03.06-32	3	4
		946	14.03.06-33	8/16/2012	N	N	N		-	-	N/A	N/A
		946	14.03.06-33	4/3/2013	N	N	N		-	-	N/A	N/A
		946	14.03.06-33	5/29/2013	Y	N	N		-	DCD_14.03.06-33	5	
		946	14.03.06-34	8/16/2012	Y	N	N		-	DCD_14.03.06-34	3	4
		946	14.03.06-34	4/3/2013	Y	N	N			DCD_14.03.06-34	4	4
		946	14.03.06-35	8/16/2012	N	N	N		-	-	N/A	N/A
		946	14.03.06-35	4/3/2013	Y	N	N		-	DCD_14.03.06-35	4	4
		946	14.03.06-36	8/16/2012	Y	N	N		-	DCD_14.03.06-36	3	4
		946	14.03.06-37	8/16/2012	Y	N	N		-	DCD_14.03.06-37	3	4
		946	14.03.06-38	8/16/2012	N	N	N		-	-	N/A	N/A
		946	14.03.06-39	8/16/2012	Y	N	N		-	DCD_14.03.06-39	3	4
		946	14.03.06-40	8/16/2012	Y	N	N		-	-	N/A	N/A
		946	14.03.06-41	8/16/2012	N	N	N		-	-	N/A	N/A
		946	14.03.06-41	4/3/2013	Y	N	N		-	DCD_14.03.06-41	4	4
		946	14.03.06-41	5/29/2013	Y	N	N		-	DCD_14.03.06-41	5	4
		946	14.03.06-42	8/16/2012	Y	N	N		-	DCD_14.03.06-42	3	4
		946	14.03.06-43	8/16/2012	Y	N	N		-	DCD_14.03.06-43	3	4

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.3.7	Plant Systems -	54	14.03.07-1/14.3.7.3.1-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
	Inspections, Tests, Analyses,	54	14.03.07-1/14.3.7.3.1-2	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
	and Acceptance Criteria	54	14.03.07-1/14.3.7.3.1-3	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.01-3	4	2
		54	14.03.07-2/14.3.7.3.2-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-2	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-3	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-4	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-5	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-5	1	2
		54	14.03.07-2/14.3.7.3.2-6	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-6	1	2
		54	14.03.07-2/14.3.7.3.2-7	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-8	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-8	1	2
		54	14.03.07-2/14.3.7.3.2-9	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-10	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-11	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-11	2	2
		54	14.03.07-2/14.3.7.3.2-12	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-13	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-14	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-14	1	2
		54	14.03.07-2/14.3.7.3.2-15	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-15	1	2
		54	14.03.07-2/14.3.7.3.2-16	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-16	1	2
		54	14.03.07-2/14.3.7.3.2-17	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-17	3	2
		54	14.03.07-2/14.3.7.3.2-18	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-18	0	2
		54	14.03.07-2/14.3.7.3.2-19	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-20	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-21	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.02-21	0	2
		54	14.03.07-2/14.3.7.3.2-22	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-2/14.3.7.3.2-23	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-2	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-3	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-4	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-5	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-6	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.04-6	1	2
		54	14.03.07-3/14.3.7.3.4-7	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-8	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-9	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.04-9	1	2
		54	14.03.07-3/14.3.7.3.4-10	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.04-10	0	2
		54	14.03.07-3/14.3.7.3.4-11	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.04-11	3	2
		54	14.03.07-3/14.3.7.3.4-12	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.04-12	0	2
		54	14.03.07-3/14.3.7.3.4-13	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-14	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-3/14.3.7.3.4-15	2008/9/19	N	N	N	fin.	-			

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		54	14.03.07-3/14.3.7.3.4-15	2009/1/9	Y	N	N		-	DCD_14.03.07.03.04-15	2	2
		54	14.03.07-4/14.3.7.3.5-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-2	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-3	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-4	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-4	0	2
		54	14.03.07-5/14.3.7.3.6-5	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-5	4	2
		54	14.03.07-5/14.3.7.3.6-6	2008/9/19	Y	Y	N	fin.	-	DCD_14.03.07.03.06-6	3	2
		54	14.03.07-5/14.3.7.3.6-7	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-7	3	2
		54	14.03.07-5/14.3.7.3.6-8	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-8	1	2
		54	14.03.07-5/14.3.7.3.6-9	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-9	2	2
		54	14.03.07-5/14.3.7.3.6-10	2008/9/19	N	N	N	fin.	-			
				2009/1/9	Y	N	N	fin.	-	DCD_14.03.07.03.06-10	2	2
		54	14.03.07-5/14.3.7.3.6-11	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-12	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-13	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-13	2	2
		54	14.03.07-5/14.3.7.3.6-14	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-14	3	2
		54	14.03.07-5/14.3.7.3.6-15	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-16	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-16	1	2
		54	14.03.07-5/14.3.7.3.6-17	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-17	1	2
		54	14.03.07-5/14.3.7.3.6-18	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-19	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-20	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-20	3	2
		54	14.03.07-5/14.3.7.3.6-21	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-5/14.3.7.3.6-22	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-22	3	2
		54	14.03.07-5/14.3.7.3.6-23	2008/9/19	Y	N	N	fin.	-	DCD_14.03.07.03.06-23	0	2
		54	14.03.07-6/14.3.7.3.7-1	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-6/14.3.7.3.7-2	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-6/14.3.7.3.7-3	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		54	14.03.07-6/14.3.7.3.7-4	2008/9/19	N	N	N	fin.	-	-	N/A	N/A
		183	14.03.07-7	2009/4/6	Y	N	N			DCD-14.03.07-7	3	2
		183	14.03.07-8	2009/4/6	Y	N	N			DCD-14.03.07-8	3	2
		183	14.03.07-9	2009/4/6	Y	N	N			DCD-14.03.07-9	3	2
		183	14.03.07-10	2009/4/6	Y	N	N			DCD-14.03.07-10	3	2
		183	14.03.07-11	2009/4/6	Y	N	N			DCD-14.03.07-11	3	2
		183	14.03.07-12	2009/4/6	Y	N	N			DCD-14.03.07-12	3	2
		183	14.03.07-13	2009/4/6	Y	N	N			DCD-14.03.07-13	3	2
		183	14.03.07-14	2009/4/6	Y	N	N			DCD-14.03.07-14	3	2
		183	14.03.07-15	2009/4/6	N	N	N			-	N/A	N/A
		447	14.03-01	2009/9/14	Y	N	N		-	DCD-14.03-1	-	2
		184	14.03.07-16	2009/4/9	Y	N	N		-	DCD_14.03.07-16	3	2
		184	14.03.07-17	2009/4/9	Y	N	N		-	DCD_14.03.07-17	3	2
		184	14.03.07-18	2009/4/9	Y	N	N		-	DCD_14.03.07-18	3	2
		184	14.03.07-19	2009/4/9	Y	N	N		-	DCD_14.03.07-19	3	2
		184	14.03.07-20	2009/4/9	Y	N	N		-	DCD_14.03.07-20	3	2
		184	14.03.07-21	2009/4/9	Y	N	N		-	DCD_14.03.07-21	3	2
		184	14.03.07-22	2009/4/9	Y	N	N		-	DCD_14.03.07-22	3	2
		184	14.03.07-23	2009/4/9	Y	N	N		-	DCD_14.03.07-23	3	2
		184	14.03.07-24	2009/4/9	Y	N	N		-	DCD_14.03.07-24	3	2
		184	14.03.07-25	2009/4/9	Y	N	N		-	DCD_14.03.07-25	3	2
		184	14.03.07-26	2009/4/9	Y	N	N		-	DCD_14.03.07-26	3	2
		184	14.03.07-27	2009/4/9	Y	N	N		-	DCD_14.03.07-27	3	2
		184	14.03.07-28	2009/4/9	N	N	N		-	-	N/A	N/A
		184	14.03.07-29	2009/4/9	Y	N	N		-	DCD_14.03.07-29	3	2
		184	14.03.07-30	2009/4/9	N	N	N		-	-	N/A	N/A
		184	14.03.07-31	2009/4/9	Y	N	N		-	DCD_14.03.07-31	3	2
		184	14.03.07-32	2009/4/9	Y	N	N		-	DCD_14.03.07-32	3	2

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		184	14.03.07-33	2009/4/9	Y	N	N		-	DCD_14.03.07-33	3	2
		447	14.03-02	2009/9/14	Y	N	N		-	DCD-14.03-2	-	2
		184	14.03.07-34	2009/4/9	Y	N	N		-	DCD_14.03.07-34	3	2
		381	14.03.07-35	2009/7/17	Y	N	N		-	DCD_14.03.07-35	4	2
		381	14.03.07-36	2009/7/17	Y	N	N		-	DCD_14.03.07-36	4	2
		381	14.03.07-37	2009/7/17	Y	N	N		-	DCD_14.03.07-37	4	2
		381	14.03.07-38	2009/7/17	Y	N	N		-	DCD_14.03.07-38	4	2
		381	14.03.07-39	2009/7/17	N	N	N		-	-	N/A	N/A
		381	14.03.07-40	2009/7/17	N	N	N		-	-	N/A	N/A
		381	14.03.07-41	2009/7/17	Y	N	N		-	DCD_14.03.07-41	4	2
		381	14.03.07-42	2009/7/17	Y	N	N		-	DCD_14.03.07-42	4	2
		381	14.03.07-43	2009/7/17	Y	N	N		-	DCD_14.03.07-43	4	2
		381	14.03.07-44	2009/7/17	Y	N	N		-	DCD_14.03.07-44	4	2
		381	14.03.07-45	2009/7/17	Y	N	N		-	DCD_14.03.07-45	-	2
		381	14.03.07-46	2009/7/17	N	N	N		-	-	N/A	N/A
		381	14.03.07-47	2009/7/17	N	N	N		-	-	N/A	N/A
		456	14.03.07-48	2009/10/5	Y	N	N		-	DCD_14.03.07-48	-	2
		456	14.03.07-49	2009/10/5	Y	N	N		-	DCD_14.03.07-49	-	2
		508	14.03.07-50	2009/12/24	Y	N	N		-	DCD_14.03.07-50	1	3
		599	14.03.07-51	2010/7/20	N	N	N		-	-	N/A	N/A
		599	14.03.07-52	2010/7/20	Y	N	N		-	DCD_14.03.07-52	4	3
		675	14.03.07-53	2011/1/31	N	N	N		-	-	N/A	N/A
		675	14.03.07-54	2011/1/31	N	N	N		-	-	N/A	N/A
		675	14.03.07-55	2011/1/31	Y	Y	N		-	DCD_14.03.07-55	0	4
		675	14.03.07-56	2011/1/31	Y	N	N		-	DCD_14.03.07-56	0	4
		685	14.03.07-57	2011/2/21	N	N	N		-	-	N/A	N/A
		782	14.03.07-58	2011/8/8	N	N	N		-	-	N/A	N/A
		782	14.03.07-58	2013/6/26	Y	Y	N		-	DCD_14.03.07-58	5	4
		926	14.03.07-59	6/7/2012	Y	N	N		-	DCD_14.03.07-59	TBD	4
		942	14.03.07-60	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-61	8/20/2012	N	N	N		-	-	N/A	N/A
		942	14.03.07-62	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-63	8/20/2012	Y	N	N		-	DCD_14.03.07-63	3	4
		942	14.03.07-64	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-65	8/20/2012	Y	N	N		-	DCD_14.03.07-65	3	4
		942	14.03.07-66	8/20/2012	Y	N	N		-	DCD_14.03.07-66	3	4
		942	14.03.07-67	8/20/2012	N	N	N		-	-	N/A	N/A
		942	14.03.07-68	8/20/2012	Y	N	N		-	DCD_14.03.07-68	3	4
		942	14.03.07-68	4/3/2013	Y	N	N		-	DCD_14.03.07-68	4	4
		942	14.03.07-69	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-70	8/20/2012	Y	N	N		-	DCD_14.03.07-70	3	4
		942	14.03.07-71	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-72	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-73	8/20/2012	Y	N	N		-	DCD_14.03.07-73	3	4
		942	14.03.07-74	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-75	8/20/2012	Y	N	N		-	DCD_14.03.07-75	3	4
		942	14.03.07-76	8/20/2012	Y	N	N		-	DCD_14.03.07-76	3	4
		942	14.03.07-76	4/3/2013	Y	N	N		-	DCD_14.03.07-76	4	4
		942	14.03.07-77	8/20/2012	N	N	N		-	-	N/A	N/A
		942	14.03.07-78	8/20/2012	Y	N	N		-	DCD_14.03.07-78	3	4
		942	14.03.07-78	4/3/2013	Y	N	N		-	DCD_14.03.07-78	4	4
		942	14.03.07-79	8/20/2012	Y	N	N		-	DCD_14.03.07-79	3	4
		942	14.03.07-79	4/3/2013	Y	N	N		-	DCD_14.03.07-79	4	4
		942	14.03.07-80	8/20/2012	N	N	N		-	-	N/A	N/A
		942	14.03.07-81	8/20/2012	Y	N	N		-	DCD_14.03.07-81	3	4
		942	14.03.07-81	4/3/2013	Y	N	N		-	DCD_14.03.07-81	4	4
		942	14.03.07-82	8/20/2012	N	N	N		-	-	N/A	N/A
		942	14.03.07-83	8/20/2012	Y	N	N		-	DCD_14.03.07-83	3	4
		942	14.03.07-83	4/2/2013	Y	N	N		-	-	N/A	N/A

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		942	14.03.07-84	8/20/2012	Y	N	N		-	DCD_14.03.07-84	3	4
		942	14.03.07-85	8/20/2012	Y	N	N		-	DCD_14.03.07-85	3	4
		942	14.03.07-86	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-87	8/20/2012	Y	N	N		-	DCD_14.03.07-87	3	4
		942	14.03.07-88	8/20/2012	Y	N	N		-	DCD_14.03.07-88	3	4
		942	14.03.07-89	8/20/2012	Y	N	N		-	DCD_14.03.07-89	3	4
		942	14.03.07-90	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-91	8/20/2012	Y	N	N		-	-	N/A	N/A
		942	14.03.07-92	8/20/2012	N	N	N		-	-	N/A	N/A
		975	14.03.07-93	11/26/2012	Y	N	N		-	DCD_14.03.07-93	3	4
		1052	14.03.07-94	9/20/2013	Y	N	N		-	DCD_14.03.07-94	0	
14.3.8	Radiation Protection -	1010	14.03.08-1	4/25/2013	N	N	N		-	-	N/A	N/A
	Inspections, Tests, Analyses,											
	and Acceptance Criteria											
14.3.9	Human Factors Engineering -	372	14.03.09-1	2009/6/11	Y	N	N		-	DCD_14.03.09-1	3	2
	Inspections, Tests, Analyses,	372	14.03.09-2	2009/6/11	Y	N	N		-	DCD_14.03.09-2	3	2
	and Acceptance Criteria	372	14.03.09-3	2009/6/11	Y	N	N		-	DCD_14.03.09-3	3	2
		372	14.03.09-3	2011/6/7	N	N	N		-	-	N/A	N/A
		372	14.03.09-4	2009/6/11	Y	N	N		-	DCD_14.03.09-4	3	2
		372	14.03.09-4	2011/6/7	N	N	N		-	-	N/A	N/A
		372	14.03.09-5	2009/6/11	Y	N	N		-	DCD_14.03.09-5	3	2
		372	14.03.09-5	2011/6/7	N	N	N		-	-	N/A	N/A
		405	14.03.09-6	2009/6/26	Y	N	N		-	DCD_14.03.09-6	3	2
		560	14.03.09-7	2010/4/23	Y	N	N		-	DCD_14.03.09-7	3	3
		560	14.03.09-8	2010/4/23	Y	N	N		-	DCD_14.03.09-8	3	3
		838	14.03.09-9	10/27/2011	N	N	N		-	-	N/A	N/A
		838	14.03.09-9	2014/1/21	Y	N	N		-	DCD-14.03.09-9 S01	0	
		838	14.03.09-10	10/27/2011	N	N	N		-	-	N/A	N/A
14.3.10	Emergency Planning -	195	14.03.10-01	2009/3/5	Y	N	N		-	DCD_14.03.10-01	2	2
	Inspections, Tests, Analyses,	195	14.03.10-01	2011/6/7	N	Y	N		-	-	N/A	N/A
	and Acceptance Criteria	195	14.03.10-02	2009/3/5	Y	N	N		-	DCD_14.03.10-02	2	2
		611	14.03.10-13	2010/7/27	Y	N	N		-	DCD_14.03.10-13	4	3
14.3.11	Containment Systems -	51	14.03.11-1	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-1	3	2
	Inspections, Tests, Analyses,	51	14.03.11-2	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-2	3	2
	and Acceptance Criteria	51	14.03.11-3	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-3	3	2
		51	14.03.11-4	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-5	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-5	0	2
		51	14.03.11-6	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-6	3	2
		51	14.03.11-7	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-8	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-8	3	2
		51	14.03.11-9	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-10	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-11	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-11	0	2
		51	14.03.11-12	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-12	0	2
		51	14.03.11-13	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-14	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-14	0	2
		51	14.03.11-15	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		51	14.03.11-16	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-16	3	2
		51	14.03.11-17	2008/9/18	Y	N	N	fin.	-	DCD_14.03.11-17	0	2
		198	14.03.11-18	2009/4/9	Y	N	N		-	DCD_14.03.11-18	3	2
		198	14.03.11-19	2009/4/9	N	N	N		-	-	N/A	N/A
		198	14.03.11-20	2009/4/9	Y	N	N		-	DCD_14.03.11-20	3	2

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		198	14.03.11-21	2009/4/9	Y	N	N		-	DCD_14.03.11-21	3	2
		198	14.03.11-22	2009/4/9	Y	N	N		-	DCD_14.03.11-22	3	2
		198	14.03.11-23	2009/4/9	Y	N	N		-	DCD_14.03.11-23	3	2
		198	14.03.11-24	2009/4/9	Y	N	N		-	DCD_14.03.11-24	3	2
		198	14.03.11-25	2009/4/9	Y	N	N		-	DCD_14.03.11-25	3	2
		198	14.03.11-26	2009/4/9	Y	N	N		-	DCD_14.03.11-26	3	2
		198	14.03.11-27	2009/4/9	Y	N	N		-	DCD_14.03.11-27	3	2
		222	14.03.11-28	2009/4/23	Y	N	N		-	DCD_14.03.11-28	3	2
		222	14.03.11-29	2009/4/23	Y	N	N		-	DCD_14.03.11-29	3	2
		222	14.03.11-30	2009/4/23	Y	Y	N		-	DCD_14.03.11-30	3	2
		222	14.03.11-31	2009/4/23	Y	N	N		-	DCD_14.03.11-31	3	2
		222	14.03.11-32	2009/4/23	Y	N	N		-	DCD_14.03.11-32	3	2
		222	14.03.11-33	2009/4/23	N	N	N		-	-	N/A	N/A
		222	14.03.11-34	2009/4/23	Y	N	N		-	DCD_14.03.11-34	3	2
		222	14.03.11-35	2009/4/23	Y	N	N		-	DCD_14.03.11-35	3	2
		222	14.03.11-36	2009/4/23	Y	N	N		-	DCD_14.03.11-36	3	2
		222	14.03.11-37	2009/4/23	Y	N	N		-	DCD_14.03.11-37	3	2
		348	14.03.11-38	2009/6/11	Y	N	N		-	DCD_14.03.11-38	3	2
		348	14.03.11-39	2009/6/11	Y	N	N		-	DCD_14.03.11-39	3	2
		488	14.03.11-40	12/25/09	Y	N	N					
		488	14.03.11-40	2010/1/13	Y	N	N		-	DCD_14.3.4.11-40	1	3
		488	14.03.11-41	12/25/09	N	N	N					
		488	14.03.11-41	2010/1/13	N	N	N		-	-	N/A	N/A
		488	14.03.11-41RAI 14.3.11-29	6/21/2013	Y	N	N		-	-	N/A	N/A
		488	14.03.11-42	12/25/09	Y	N	N					
		488	14.03.11-42	2010/1/13	Y	N	N		-	DCD_14.3.4.11-42	1	3
		550	14.03.11-43	2010/3/25	Y	N	N		-	DCD_14.3.4.11-43	3	3
		937	14.03.11-44	8/23/2012	Y	N	N		-	DCD_14.03.11-44	3	4
		937	14.03.11-45	8/23/2012	Y	N	N		-	DCD_14.03.11-45	3	4
		937	14.03.11-45	3/11/2013	Y	N	N		-	DCD_14.03.11-46	4	4
		937	14.03.11-46	8/23/2012	Y	N	N		-	DCD_14.03.11-46	3	4
		937	14.03.11-47	8/23/2012	Y	N	N		-	DCD_14.03.11-47	3	4
		937	14.03.11-48	8/23/2012	Y	N	N		-	-	N/A	N/A
		937	14.03.11-49	8/23/2012	Y	N	N		-	DCD_14.03.11-49	3	4
		937	14.03.11-50	8/23/2012	Y	N	N		-	DCD_14.03.11-50	3	4
		937	14.03.11-51	8/23/2012	Y	N	N		-	DCD_14.03.11-51	3	4

Chapter:14

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
14.3.12	Physical Security Hardware -	52	14.03.12-1	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
	Inspections, Tests, Analyses,	52	14.03.12-2	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
	and Acceptance Criteria	52	14.03.12-3	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-4	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-5	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-6	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-7	2008/9/18	Y	N	N	fin.	-	DCD_14.03.12-7	-	2
		52	14.03.12-8	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-9	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-10	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		52	14.03.12-11	2008/9/18	Y	N	N	fin.	-	DCD_14.03.12-11	4	2
		261	14.03.12-12	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-13	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-14	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-15	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-16	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-17	2009/4/3	N	N	N		-	-	N\A	N\A
		261	14.03.12-18	2009/4/3	N	N	N		-	-	N\A	N\A
		396	14.03.12-20	2009/7/17	Y	N	N		-	DCD_14.03.12-20	2	3
		396	14.03.12-21	2009/7/17	N	N	N		-	-	N\A	N\A
		396	14.03.12-22	2009/7/17	N	N	N		-	-	N\A	N\A
		396	14.03.12-23	2009/7/17	N	N	N		-	-	N\A	N\A
		396	14.03.12-24	2009/7/17	N	N	N		-	-	N\A	N\A
		481	14.03.12-25	11/10/2009	N	N	N		-	-	N\A	N/A
		481	14.03.12-26	11/10/2009	Y	N	N		-	DCD_14.03.12-26	0	3
		481	14.03.12-27	11/10/2009	Y	N	N		-	DCD_14.03.12-27	0	3
		481	14.03.12-28	11/10/2009	N	N	N		-	-	N\A	N/A
		481	14.03.12-29	11/10/2009	Y	N	N		-	DCD_14.03.12-29	0	3
		481	14.03.12-30	11/10/2009	Y	N	N		-	DCD_14.03.12-30	0	3
		673	14.03.12-31	2010/12/22	N	N	N		-	-	N\A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15	Introduction -	297	15.0.0-1	2009/7/3	Y	N	N		-	DCD_15.0.0-1	4	2
	Transient and Accident Analyses	297	15.0.0-2	2009/7/3	Y	N	N		-	DCD_15.0.0-2	4	2
		297	15.0.0-3	2009/7/3	Y	N	N		-	DCD_15.0.0-3	4	2
		297	15.0.0-4	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-5	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-6	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-7	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-8	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-9	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-10	2009/7/3	N	N	N		-	-	N/A	N/A
				2011/12/20	N	N	N		-	-	N/A	N/A
		297	15.0.0-11	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-11	2012/1/31	N	N	N		-	-	N/A	N/A
		297	15.0.0-12	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-13	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-14	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-15	2009/7/3	Y	N	N		-	DCD_15.0.0-15	4	2
		297	15.0.0-16	2009/7/3	N	N	N		-	-	N/A	N/A
				12/20/2011	N	N	N		-	-	N/A	N/A
		297	15.0.0-17	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-18	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-19	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-20	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-21	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-22	2009/7/3	N	N	N		-	-	N/A	N/A
		297	15.0.0-23	2009/7/3	N	N	N		-	-	N/A	N/A
		687	15.0.0-24	2011/2/25	Y	N	N		-	DCD_15.0.0-24	0	4
				2011/9/9	Y	N	N		-	DCD_15.0.0-24	1	4
		769	15.0.0-25	2011/7/15	N	N	N		-	-	N/A	N/A
		769	15.0.0-26	2011/7/15	Y	N	N		-	DCD_15.0.0-26	1	4
				2011/9/9	Y	N	N		-	DCD_15.0.0-26	1	4
		769	15.0.0-27	2011/7/15	N	N	N		-	-	N/A	N/A
				2011/9/9	N	N	N		-	-	N/A	N/A
		769	15.0.0-28	2011/7/15	N	N	N		-	-	N/A	N/A
		769	15.0.0-29	2011/7/15	N	N	N		-	-	N/A	N/A
				2011/9/9	N	N	N		-	-	N/A	N/A
		786	15-30	8/25/2011	Y	N	N		-	DCD_15-30	1	4
		786	15-31	8/25/2011	Y	N	N		-	DCD_15-31	1	4
		786	15-32	8/25/2011	N	N	N		-	-	N/A	N/A
		809	15-33	9/30/2011	Y	N	N		-	DCD_15-33	1	4
		809	15-34	9/30/2011	Y	N	N		-	DCD_15-33, 15.02.01-15.02.05-9	1	4
		864	15-35	12/07/2011	N	N	N		-	-	N/A	N/A
		864	15-36	12/07/2011	N	N	N		-	-	N/A	N/A
		882	15-37	01/31/2012	N	N	N		-	-	N/A	N/A
		882	15-38	01/31/2012	Y	N	N		-	DCD_15-38	2	4
		882	15-39	01/31/2012	N	N	N		-	-	N/A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15.0.1	Radiological Consequence Analyses											
	Using Alternative Source Terms											
15.0.2	Review of											
	Transient and											
	Accident Analysis Method											
15.0.3	Design Basis Accident	38	15.00.03-1	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
	Radiological Consequences	38	15.00.03-2	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
	of Analyses for	38	15.00.03-3	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
	Advanced Light Water Reactors	38	15.00.03-4	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-5	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-6	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-7	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-8	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-9	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-9	0	2
		38	15.00.03-10	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-11	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-11	0	2
		38	15.00.03-12	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-13	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-13	0	2
		38	15.00.03-14	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-14	-	1
		38	15.00.03-15	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-16	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-16	0	2
		38	15.00.03-17	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-18	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-19	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-20	2008/10/20	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-21	2008/10/20	N	N	N	fin.	-	-	N/A	N/A
		38	15.00.03-22	2008/8/22	Y	N	N	fin.	-	DCD_15.00.03-22	0	2
		38	15.00.03-23	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		105	15.00.03-24	2009/1/6	N	N	N	fin.	-	-	N/A	N/A
		105	15.00.03-25	2009/1/6	Y	Y	N	fin.	-	DCD_15.00.03-25	0	2
		106	15.00.03-26	2009/1/6	Y	Y	N	fin.	-	DCD_15.00.03-26	0	2
		176	15.00.03-27	2009/3/3	N	N	N		-	-	N/A	N/A
		176	15.00.03-28	2009/3/3	N	N	N		-	-	N/A	N/A
		390	15.00.03-29	2009/7/13	N	N	N		-	-	N/A	N/A
		418	15.00.03-30	2009/8/3	N	N	N		-	-	N/A	N/A
		420	15.00.03-31	2009/8/3	N	N	N		-	-	N/A	N/A
		492	15.00.03-32	2009/12/11	N	N	N		-	-	N/A	N/A
15.1.1-	Decrease in Feedwater Temperature,	301	15.1-1	2009/6/16	N	N	N		-	-	N/A	N/A
15.1.4	Increase in Feedwater Flow,	301	15.1-2	2009/6/16	N	N	N		-	-	N/A	N/A
	Increase in Steam Flow,	301	15.1-3	2009/6/16	N	N	N		-	-	N/A	N/A
	and Inadvertent Opening of a	301	15.1-4	2009/6/16	N	N	N		-	-	N/A	N/A
	Steam Generator Relief or Safety Valve	301	15.1-5	2009/6/16	N	N	N		-	-	N/A	N/A
		301	15.1-6	2009/6/16	N	N	N		-	-	N/A	N/A
		787	15.01.01-15,15.01.04-7	8/25/2011	Y	N	N		-	CD_15.01.01-15,15.01.04-	1	4
		787	15.01.01-15,15.01.04-8	8/25/2011	Y	N	N		-	CD_15.01.01-15,15.01.04-	1	4
		811	15.01.01-15,15.01.04-9	9/30/2011	N	N	N		-	-	N/A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15.1.5	Steam System Piping Failures	302	15.1.5-1	2009/7/3	N	N	N		-	-	N/A	N/A
	Inside and Outside of Containment	302	15.1.5-2	2009/7/3	N	N	N		-	-	N/A	N/A
	(PWR)	302	15.1.5-3	2009/7/3	N	N	N		-	-	N/A	N/A
		302	15.1.5-4	2009/7/3	N	N	N		-	-	N/A	N/A
		302	15.1.5-5 (Deleted)	2009/7/3								
		788	15.01.05-6	8/25/2011	Y	N	N		-	DCD_15.01.05-6	1	4
		788	15.01.05-7	8/25/2011	N	N	N		-	-	N/A	N/A
		865	15.01.05-8	12/12/2011	Y	N	N		-	DCD_15.02.05-8	1	4
		1038	15.01.05-9	6/3/2013	N	N	N		-	-	N/A	N/A
15.2.1-	Loss of External Load;	303	15.2-1	2009/7/3	N	N	N		-	-	N/A	N/A
15.2.5	Turbine Trip;	303	15.2-2	2009/7/3	Y	N	N		-	DCD_15.2-2	4	2
	Loss of Condenser Vacuum;	303	15.2-3	2009/7/3	N	N	N		-	-	N/A	N/A
	Closure of Main Steam	303	15.2-4	2009/7/3	N	N	N		-	-	N/A	N/A
	Isolation Valve (BWR);	303	15.2-5	2009/7/3	N	N	N		-	-	N/A	N/A
	and Steam Pressure	303	15.2-6 (Deleted)	2009/7/3					-			
	Regulator Failure (Closed)	303	15.2-7 (Deleted)	2009/7/3					-			
		303	15.2-8	2009/7/3	Y	N	N		-	DCD_15.2-8	4	2
		789	15.02.01-15.02.05-9	9/30/2011	Y	N	N		-	DCD_15.02.01-15.02.05-9	1	4
		789	15.02.01-15.02.05-10	9/30/2011	N	N	N		-	-	N/A	N/A
15.2.6	Loss of Nonemergency AC Power	304	15.2.6-1	2009/6/16	N	N	N		-	-	N/A	N/A
	to the Station Auxiliaries											
15.2.7	Loss of Normal Feedwater Flow											
15.2.8	Feedwater System Pipe Breaks	305	15.2.8-1	2009/7/3	N	N	N		-	-	N/A	N/A
	Inside and Outside Containment	305	15.2.8-2	2009/7/3	N	N	N		-	-	N/A	N/A
	(PWR)	305	15.2.8-3	2009/7/3	N	N	N		-	-	N/A	N/A
15.3.1-	Loss of Forced Reactor Coolant Flow	306	15.3.1-1	2009/6/16	N	N	N		-	-	N/A	N/A
15.3.2	Including Trip of Pump Motor and	306	15.3.1-2	2009/6/16	N	N	N		-	-	N/A	N/A
	Flow Controller Malfunctions	306	15.3.1-3	2009/6/16	N	N	N		-	-	N/A	N/A
		306	15.3.1-4	2009/6/16	N	N	N		-	-	N/A	N/A
		306	15.3.1-5	2009/6/16	N	N	N		-	-	N/A	N/A
		306	15.3.1-6	2009/6/16	N	N	N		-	-	N/A	N/A
		306	15.3.1-7	2009/6/16	N	N	N		-	-	N/A	N/A
				2011/12/20	N	N	N		-	-	N/A	N/A
		306	15.3.1-8	2009/6/16	N	N	N		-	-	N/A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15.3.3-	Reactor Coolant Pump Rotor Seizure	353	15.3.3.1	2009/7/3	N	N	N		-	-	N/A	N/A
15.3.4	and Reactor Coolant Pump	353	15.3.3.2	2009/7/3	N	N	N		-	-	N/A	N/A
	Shaft Break	353	15.3.3.3	2009/7/3	N	N	N		-	-	N/A	N/A
		900	15.03.03-15.03.04-4	03/07/2012	N	N	N					
		889	15.04.01-10	1/31/2012	N	N	N		-	-	N/A	N/A
15.4.1	Uncontrolled Control Rod Assembly	308	15.4.1-1	2009/7/3	N	N	N		-	-	N/A	N/A
	Withdrawal from a	308	15.4.1-2	2009/7/3	N	N	N		-	-	N/A	N/A
	Subcritical or	308	15.4.1-3	2009/7/3	N	N	N		-	-	N/A	N/A
	Low Power Startup Condition	308	15.4.1-4	2009/7/3	N	N	N		-	-	N/A	N/A
		308	15.4.1-5	2009/7/3	N	N	N		-	-	N/A	N/A
		308	15.4.1-6	2009/7/3	N	N	N		-	-	N/A	N/A
		308	15.4.1-7	2009/7/3	N	N	N		-	-	N/A	N/A
		308	15.4.1-8	2009/7/3	N	N	N		-	-	N/A	N/A
		308	15.4.1-9	2009/7/3	N	N	N		-	-	N/A	N/A
		889	15.04.01-10	1/31/2012	N	N	N		-	-	N/A	N/A
15.4.2	Uncontrolled Control Rod Assembly	309	15.4.2-1	2009/5/15	N	N	N		-	-	N/A	N/A
	Withdrawal at Power	309	15.4.2-2	2009/5/15	N	N	N		-	-	N/A	N/A
15.4.3	Control Rod Misoperation	310	15.4.3-1	2009/7/3	N	N	N		-	-	N/A	N/A
	(System Malfunction or	310	15.4.3-2	2009/7/3	N	N	N		-	-	N/A	N/A
	Operator Error)	310	15.4.3-3	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-4	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-5	2009/7/3	Y	N	N		-	DCD_15.4.3-5	4	2
		310	15.4.3-6	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-7	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-8	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-9	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.04.03-9	6/26/2012	N	N	N		-	-	N/A	N/A
		310	15.4.3-10	2009/7/3	N	N	N		-	-	N/A	N/A
		310	15.4.3-11	2009/7/3	N	N	N		-	-	N/A	N/A
		888	15.04.03-12	1/31/2012	N	N	N		-	-	N/A	N/A
		904	15.04.03-13	4/20/2012	N	N	N		-	-	N/A	N/A
		968	15.04.03-14	11/09/2012	N	N	N		-	-	N/A	N/A
15.4.4-	Startup of an Inactive Loop or											
15.4.5	Recirculation Loop at an	903	15.04.04-15.04.05-1	03/16/2012	N	N	N		-	-	N/A	N/A
	Incorrect Temperature,	964	15.04.04-15.04.05-2	11/09/2012	N	N	N		-	-	N/A	N/A
	and Flow Controller Malfunction											
	Causing an Increase											
	in BWR Core Flow Rate											

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15.4.6	Inadvertent Decrease in	311	15.4.6-1	2009/6/16	N	N	N		-	-	N/A	N/A
	Boron Concentration in the	311	15.4.6-2	2009/6/16	N	N	N		-	-	N/A	N/A
	Reactor Coolant System (PWR)	311	15.4.6-3	2009/6/16	N	N	N		-	-	N/A	N/A
		311	15.4.6-4	2009/6/16	N	N	N		-	-	N/A	N/A
		311	15.4.6-5	2009/6/16	Y	N	N			DCD_15.4.6-5	4	2
		311	15.4.6-5	2011/1/14	N	N	N		-	-	N/A	N/A
		682	15.04.06-6	2011/4/15	Y	Y	N		-	DCD_15.04.06-6	0	4
		682	15.04.06-7	2011/4/15	N	N	N		-	-	N/A	N/A
		682	15.04.06-8	2011/4/15	N	N	N		-	-	N/A	N/A
		708	15.04.06-9	2011/4/15	Y	N	N		-	DCD_15.04.06-9	0	4
		902	15.04.06-10	2012/3/7	N	N	N		-	-	N/A	N/A
		902	15.04.06-10	5/28/2013	Y	Y	N		-	DCD_15.04.06-10	5	4
		965	15.04.06-11	11/22/2012	Y	N	N			DCD_15.04.06-11	3	4
15.4.7	Inadvertent Loading	312	15.4.7-1	2009/5/15	N	N	N		-	-	N/A	N/A
	and Operation of a Fuel Assembly	312	15.4.7-2	2009/5/15	N	N	N		-	-	N/A	N/A
	in an Improper Position	312	15.4.7-3	2009/5/15	N	N	N		-	-	N/A	N/A
15.4.8	Spectrum of	313	15.4.8-1	2009/7/3	N	N	N		-	-	N/A	N/A
	Rod Ejection Accidents (PWR)	313	15.4.8-2	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-2	2011/7/29	N	N	N		-	-	N/A	N/A
		313	15.4.8-3	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-4	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-5	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-6	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-7	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-8	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-9	2009/7/3	N	N	N		-	-	N/A	N/A
		313	15.4.8-10 (Deleted)	2009/7/3								
		785	15.04.08-11	8/31/2011	Y	N	N		-	DCD_15.04.08-11	1	4
		911	15.04.08-12	04/05/2012	N	N	N		-	-	N/A	N/A
15.5.1-15.5.2	Inadvertent Operation of ECCS and Chemical and Volume Control System Malfunction that Increases Reactor Coolant Inventory	307	15.5.2-1	2009/6/16	N	N	N		-	-	N/A	N/A
		307	15.5.2-2	2009/6/16	N	N	N		-	-	N/A	N/A
		307	15.5.2-3	2009/6/16	N	N	N		-	-	N/A	N/A
15.5.7	Radioactive Releases from a Subsystem or Component											
15.6.1	Inadvertent Opening of a PWR Pressurizer Pressure Relief Valve or a BWR Pressure Relief Valve	314	15.6.1-1	2009/5/15	N	N	N		-	-	N/A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
15.6.3	Radiological Consequences	298	15.6.3-1 (Deleted)	2009/7/3								
	of Steam Generator Tube Failure	298	15.6.3-2	2009/7/3	N	N	N		-	-	N/A	N/A
		808	15.06.03-3	2011/9/22	N	N	N		-	-	N/A	N/A
		808	15.06.03-3	2011/12/9	N	N	N		-	-	N/A	N/A
		808	15.06.03-4	2011/9/22	N	N	N		-	-	N/A	N/A
		808	15.06.03-5	2011/9/22	N	N	N		-	-	N/A	N/A
		808	15.06.03-6	2011/9/22	Y	N	N		-	DCD_15.06.03-6	1	4
		808	15.06.03-7	2011/9/22	N	N	N		-	-	N/A	N/A
		808	15.06.03-8	2011/9/22	N	N	N		-	-	N/A	N/A
		808	15.06.03-8	2011/12/9	N	N	N		-	-	N/A	N/A
15.6.5	Loss-of-Coolant Accidents	352	15.6.5-1	2009/7/17	N	N	N		-	-	N/A	N/A
	Resulting From Spectrum of	352	15.6.5-2	2009/7/17	N	N	N		-	-	N/A	N/A
	Postulated Piping Breaks	352	15.6.5-3	2009/7/17	N	N	N		-	-	N/A	N/A
	Within the Reactor Coolant	352	15.6.5-4	2009/7/17	N	N	N		-	-	N/A	N/A
	Pressure Boundary	352	15.6.5-5	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-6	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-7	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-8	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-9	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-10	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-11	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-12	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-13	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-14	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-15	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-16	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-17	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-18	2009/7/17	Y	N	N		-	DCD_15.6.5-18	4	2
		352	15.6.5-19	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-20	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-20	2011/6/13	N	N	N		-	-	N/A	N/A
		352	15.6.5-21	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-22	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-23	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-24	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-25	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-26	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-27	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-28	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-29	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-30	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-31	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-32	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-33	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-34	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-35	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-36	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-37	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-38	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-39	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-40	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-41	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-42	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-43	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-44	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-45	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-46	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-47	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-48	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-49	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-50	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-51	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-52	2009/7/17	N	N	N		-	-	N/A	N/A

Chapter:15

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		352	15.6.5-53	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-54	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-55	2009/7/17	N	N	N		-	-	N/A	N/A
		352	15.6.5-56	2009/7/17	N	N	N		-	-	N/A	N/A
		513	15.06.05-57	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-58	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-59	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-60	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-61	2010/2/15	N	N	N		-	-	N/A	N/A
		514	15.06.05-62	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-63	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-64	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-65	2010/2/15	N	N	N		-	-	N/A	N/A
		514	15.06.05-66	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-67	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-68	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-69	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-70	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-71	2010/2/15	N	N	N		-	-	N/A	N/A
		514	15.06.05-72	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-73	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-74	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-75	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-76	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-77	2010/2/5	N	N	N		-	-	N/A	N/A
		514	15.06.05-78	2010/2/5	N	N	N		-	-	N/A	N/A
		706	15.06.05-79	2011/4/28	N	N	N		-	-	N/A	N/A
		706	15.06.05-80	2011/3/29	N	N	N		-	-	N/A	N/A
		706	15.06.05-81	2011/4/28	N	N	N		-	-	N/A	N/A
		706	15.06.05-82	2011/4/28	N	N	N		-	-	N/A	N/A
		718	15.06.05-83	2011/5/13	N	N	N		-	-	N/A	N/A
		718	15.06.05-84	2011/5/13	N	N	N		-	-	N/A	N/A
		718	15.06.05-85	2011/5/13	N	N	N		-	-	N/A	N/A
		718	15.06.05-86	2011/5/13	N	N	N		-	-	N/A	N/A
		719	15.06.05-87	2011/5/18	N	N	N		-	-	N/A	N/A
		719	15.06.05-88	2011/4/18	N	N	N		-	-	N/A	N/A
		719	15.06.05-89	2011/5/18	N	N	N		-	-	N/A	N/A
		719	15.06.05-90	2011/4/18	N	N	N		-	-	N/A	N/A
		719	15.06.05-91	2011/5/16	N	N	N		-	-	N/A	N/A
		861	15.06.05-92	12/02/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-93	12/02/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-94	12/02/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-95	12/22/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-96	12/22/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-97	12/02/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-98	xx/yy/2011								
		861	15.06.05-99	12/02/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-100	4/23/2013	N	N	N		-	-	N/A	N/A
		861	15.06.05-100	12/22/2011	N	N	N		-	-	N/A	N/A
		861	15.06.05-100	4/23/2013	N	N	N		-	-	N/A	N/A
		861	15.06.05-100	8/6/2013	N	N	N		-	-	N/A	N/A
		969	15.06.05-101	1/18/2013	N	N	N		-	-	N/A	N/A
		969	15.06.05-101	2/13/2013	Y	N	N		-	DCD_15.06.05-101	4	4
		1042	15.06.05-102	8/1/2013	N	N	N		-	-	N/A	N/A
15.8	Anticipated Transients Without Scram											

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
16.1	General, Plant Sys,	133	16-12	2009/1/29	Y	Y	N		-	DCD_16-12	1	2
	Refueling, & Adm Ctrls:	133	16-13	2009/1/29	Y	Y	N		-	DCD_16-13	1	2
	Technical Specifications	133	16-14	2009/1/29	Y	Y	N		-	DCD_16-14	1	2
		133	16-15	2009/1/29	N	N	N		-	-	N/A	N/A
		133	16-16	2009/1/29	Y	Y	N		-	DCD_16-16	1	2
		133	16-17	2009/1/29	Y	Y	N		-	DCD_16-17	1	2
		133	16-18	2009/1/29	Y	Y	N		-	DCD_16-18	1	2
		133	16-19	2009/1/29	Y	Y	N		-	DCD_16-19	1	2
		133	16-20	2009/1/29	N	N	N		-	-	N/A	N/A
		134	16-27	5/23/2013	Y	Y	N		-	DCD_16-27	5	4
		134	16-27	6/25/2013	Y	Y	N		-	DCD_16-27	5	4
		161	16-115	2009/2/20	Y	Y	N		-	DCD_16-115	1	2
		161	16-116	2009/2/20	Y	Y	N		-	DCD_16-116	1	2
		161	16-117	2009/3/19	N	N	N		-	-	N/A	N/A
		161	16-117	2012/2/8	Y	Y	Y		-	DCD_16-117	2	4
		161	16-117	6/14/2013	Y	Y	-		-	-	N/A	N/A
		161	16-117	12/13/2013	Y	Y	-		-	DCD_19-494 S03	0	
		161	16-118	2009/2/20	Y	Y	N		-	DCD_16-118	1	2
		161	16-119	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-120	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-121	2009/2/20	Y	Y	N		-	DCD_16-121	1	2
		161	16-122	2009/2/20	Y	Y	N		-	DCD_16-122	1	2
		161	16-123	2009/2/20	Y	Y	N		-	DCD_16-123	1	2
		161	16-124	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-125	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-126	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-127	2009/2/20	Y	Y	N		-	DCD_16-127	2	2
		161	16-128	2009/2/20	Y	Y	N		-	DCD_16-128	1	2
		161	16-129	2009/2/20	Y	Y	N		-	DCD_16-129	1	2
		161	16-130	2009/2/20	Y	Y	N		-	DCD_16-130	-	4
		161	16-131	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-132	2009/2/20	Y	Y	N		-	DCD_16-132	1	2
		161	16-133	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-134	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-135	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-135	**2011/10/19**	**N**	**N**	**N**		-	-	N/A	N/A
		161	16-136	2009/2/20	Y	Y	N		-	DCD_16-136	1	2
		161	16-136	**2011/10/7**	**Y**	**Y**	N		-		1	4
		161	16-137	2009/2/20	N	N	N		-	-	N/A	N/A
		161	16-138	2009/2/20	Y	Y	N		-	DCD_16-138	1	2
		161	16-139	2009/2/20	Y	Y	N		-	DCD_16-139	-	4
		161	16-140	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-141	2009/2/20	Y	Y	N		-	DCD_16-141	1	2
		162	16-142	2009/2/20	Y	Y	N		-	DCD_16-142	1	2
		162	16-143	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-144	2009/2/20	Y	Y	N		-	DCD_16-144	1	2
		162	16-145	2009/2/20	Y	Y	N		-	DCD_16-145	1	2
		162	16-146	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-147	2009/2/20	Y	Y	N		-	DCD_16-147	1	2
		162	16-148	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-149	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-150	2009/2/20	Y	Y	N		-	DCD_16-150	1	2
		162	16-151	2009/2/20	Y	Y	N		-	DCD_16-151	1	2
		162	16-152	2009/2/20	N	N	N		-	-	N/A	N/A
		162	16-153	2009/2/20	Y	Y	N		-	DCD_16-153	1	2
		162	16-154	2009/2/20	Y	Y	N		-	DCD_16-154	1	2
		162	16-155	2009/2/20	Y	Y	N		-	DCD_16-155	2	2
		162	16-156	2009/2/20	N	N	N		-	-	N/A	N/A

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		162	16-157	2009/2/20	Y	Y	N		-	DCD_16-157	1	2
		166	16-158	2009/3/18	Y	Y	N		-	DCD_16-158	3	2
		166	16-159	2009/3/18	Y	Y	N		-	DCD_16-159	3	2
		166	16-160	2009/3/18	Y	Y	N		-			
		166	16-160	2009/7/3	Y	Y	N		-	DCD_16-160	3	2
		166	16-161	2009/3/18	Y	Y	N		-			
		166	16-161	2009/7/3	Y	Y	N		-	DCD_16-161	3	2
		166	16-162	2009/3/18	Y	Y	N		-			
		166	16-162	2009/7/3	Y	Y	N		-	DCD_16-162	3	2
		166	16-163	2009/3/18	Y	Y	N		-			
		166	16-163	2009/7/3	Y	Y	N		-	DCD_16-163	3	2
		166	16-164	2009/3/18	Y	Y	N		-			
		166	16-164	2009/7/3	Y	Y	N		-	DCD_16-164	3	2
		166	16-165	2009/3/18	N	N	N		-	-	N/A	N/A
		166	16-166	2009/3/18	Y	Y	N		-			
		166	16-166	2009/7/3	Y	Y	N		-	DCD_16-166	3	2
		166	16-167	2009/3/18	Y	Y	N		-			
		166	16-167	2009/7/3	Y	Y	N		-	DCD_16-167	3	2
		166	16-168	2009/3/18	Y	Y	N		-	DCD_16-168	3	2
		166	16-169	2009/3/18	Y	Y	N		-	DCD_16-169	3	2
		166	16-170	2009/3/18	Y	Y	N		-	DCD_16-170	3	2
		166	16-171	2009/3/18	Y	Y	N		-			
		166	16-171	2009/7/3	Y	Y	N		-	DCD_16-171	3	2
		166	16-172	2009/3/18	N	N	N		-	-	N/A	N/A
		166	16-173	2009/3/18	N	N	N		-			
		166	16-173	2009/7/3	N	N	N		-	-	N/A	N/A
		166	16-174	2009/3/18	N	N	N		-	-	N/A	N/A
		166	16-175	2009/3/18	Y	Y	N		-	DCD_16-175	3	2
		166	16-176	2009/3/18	Y	Y	N		-			
		166	16-177	2009/3/18	Y	Y	N		-			
		166	16-177	2009/7/3	Y	Y	N		-	DCD_16-177	3	2
		166	16-178	2009/3/18	Y	Y	N		-			
		166	16-178	2009/7/3	Y	Y	N		-	DCD_16-178	3	2
		166	16-179	2009/3/18	Y	Y	N		-			
		166	16-179	2009/7/3	Y	Y	N		-	DCD_16-179	3	2
		166	16-180	2009/3/18	Y	Y	N		-			
		166	16-180	2009/7/3	Y	Y	N		-	DCD_16-180	3	2
		166	16-181	2009/3/18	Y	Y	N		-			
		166	16-181	2009/7/3	Y	Y	N		-	DCD_16-181	3	2
		166	16-182	2009/3/18	Y	Y	N		-			
		166	16-182	2009/7/3	Y	Y	N		-	DCD_16-182	3	2
		166	16-183	2009/3/18	N	N	N		-	-	N/A	N/A
		166	16-184	2009/3/18	Y	Y	N		-			
		166	16-184	2009/7/3	Y	Y	N		-	DCD_16-184	3	2
		166	16-185	2009/3/18	Y	Y	N		-			
				2009/7/3	Y	Y	N		-	DCD_16-185	3	2
		166	16-186	2009/3/18	Y	N	N		-			
		166	16-186	2009/7/3	Y	Y	N		-	DCD_16-186	3	2
		166	16-187	2009/3/18	N	N	N		-			
		166	16-187	2009/7/3	N	N	N		-	-	N/A	N/A
		166	16-188	2009/3/18	N	N	N		-	-	N/A	N/A
		166	16-189	2009/3/18	Y	Y	N		-			
		166	16-189	2009/7/3	Y	Y	N		-	DCD_16-189	3	2
		166	16-190	2009/3/18	Y	Y	N		-			
		166	16-190	2009/7/3	Y	Y	N		-	DCD_16-190	3	2
		166	16-191	2009/3/18	Y	Y	N		-			
		166	16-191	2009/7/3	Y	Y	N		-	DCD_16-191	3	2
		166	16-192	2009/3/18	Y	Y	N		-			
		166	16-192	2009/7/3	Y	Y	N		-	DCD_16-192	3	2
		166	16-193	2009/3/18	Y	N	N		-			
		166	16-193	2009/7/3	Y	Y	N		-	DCD_16-193	3	2
		166	16-194	2009/3/18	Y	Y	N		-			
		166	16-194	2009/7/3	Y	Y	N		-	DCD_16-194	3	2
		166	16-195	2009/3/18	Y	N	N		-			
		166	16-195	2009/7/3	Y	Y	N		-	DCD_16-195	3	2

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		167	16-196	2009/3/23	Y	Y	N		-	DCD_16-196	3	2
		167	16-197	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-198	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-199	2009/3/23	Y	N	N		-	DCD_16-199	3	2
		167	16-200	2009/3/23	Y	Y	N		-	DCD_16-200	3	2
		167	16-201	2009/3/23	Y	Y	N		-	DCD_16-201	3	2
		167	16-202	2009/3/23	Y	Y	N		-	DCD_16-202	3	2
		167	16-203	2009/3/23	Y	Y	N		-	DCD_16-203	3	2
		167	16-204	2009/3/23	Y	N	N		-	DCD_16-204	3	2
		167	16-205	2009/3/23	Y	Y	N		-			
		167	16-205	2009/7/3	Y	Y	N		-	DCD_16-205	3	2
		167	16-206	2009/3/23	Y	Y	N		-			
		167	16-206	2009/7/3	Y	Y	N		-	DCD_16-206	3	2
		167	16-207	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-208	2009/3/23	Y	Y	N		-	DCD_16-208	3	2
		167	16-209	2009/3/23	Y	Y	N		-	DCD_16-209	3	2
		167	16-210	2009/3/23	Y	Y	N		-	DCD_16-210	3	2
		167	16-211	2009/3/23	Y	Y	N		-	DCD_16-211	3	2
		167	16-212	2009/3/23	Y	Y	N		-			
		167	16-212	2009/7/3	Y	Y	N		-	DCD_16-212	3	2
		167	16-213	2009/3/23	Y	N	N		-	DCD_16-213	3	2
		167	16-214	2009/3/23	Y	Y	N		-	DCD_16-214	3	2
		167	16-215	2009/3/23	Y	Y	N		-	DCD_16-215	3	2
		167	16-216	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-217	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-218	2009/3/23	Y	Y	N		-	DCD_16-218	3	2
		167	16-219	2009/3/23	Y	Y	N		-	DCD_16-219	3	2
		167	16-220	2009/3/23	Y	Y	N		-	DCD_16-220	3	2
		167	16-221	2009/3/23	Y	Y	N		-	DCD_16-221	3	2
		167	16-222	2009/3/23	Y	Y	N		-	DCD_16-222	3	2
		167	16-223	2009/3/23	Y	Y	N		-	DCD_16-223	3	2
		167	16-224	2009/3/23	Y	Y	N		-			
		167	16-224	2009/7/3	Y	Y	N		-	DCD_16-224	3	2
		167	16-225	2009/3/23	Y	Y	N		-			
		167	16-225	2009/7/3	Y	Y	N		-	DCD_16-225	3	2
		167	16-226	2009/3/23	Y	Y	N		-	DCD_16-226	3	2
		167	16-227	2009/3/23	Y	Y	N		-	DCD_16-227	-	2
		167	16-228	2009/3/23	Y	Y	N		-			
		167	16-228	2009/7/3	Y	Y	N		-	DCD_16-228	3	2
		167	16-229	2009/3/23	Y	Y	N		-	DCD_16-229	3	2
		167	16-230	2009/3/23	N	N	N		-			
		167	16-230	2009/7/3	N	N	N		-	-	N/A	N/A
		167	16-230	2012/1/27	Y	Y	Y		-	DCD_16-230	2	4
		167	16-231	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-231	2012/1/27	Y	Y	Y		-	DCD_16-231	2	4
		167	16-232	2009/3/23	Y	Y	N		-			
		167	16-232	2009/7/3	Y	Y	N		-	DCD_16-232	3	2
		167	16-233	2009/3/23	Y	Y	N		-	DCD_16-233	3	2
		167	16-234	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-235	2009/3/23	Y	Y	N		-	DCD_16-235	3	2
		167	16-236	2009/3/23	Y	N	N		-	DCD_16-236	3	2
		167	16-237	2009/3/23	Y	N	N		-	DCD_16-237	3	2
		167	16-238	2009/3/23	Y	Y	N		-	DCD_16-238	3	2
		167	16-239	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-240	2009/3/23	Y	Y	N		-			
		167	16-240	2009/7/3	Y	Y	N		-	DCD_16-240	3	2
		167	16-241	2009/3/23	Y	Y	N		-			
		167	16-241	2009/7/3	Y	Y	N		-	DCD_16-241	3	2
		167	16-242	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-243	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-244	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-245	2009/3/23	Y	Y	N		-	DCD_16-245	3	2
		167	16-246	2009/3/23	Y	N	N		-	DCD_16-246	3	2
		167	16-247	2009/3/23	Y	Y	N		-			
		167	16-247	2009/7/3	Y	Y	N		-	DCD_16-247	3	2

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		167	16-248	2009/3/23	Y	Y	N		-	DCD_16-248	3	2
		167	16-249	2009/3/23	Y	Y	N		-			
		167	16-249	2009/7/3	Y	Y	N		-	DCD_16-249	3	2
		167	16-250	2009/3/23	Y	Y	N		-			
		167	16-250	2009/7/3	Y	Y	N		-	DCD_16-250	3	2
		167	16-251	2009/3/23	Y	N	N		-	DCD_16-251	3	2
		167	16-252	2009/3/23	Y	Y	N		-			
		167	16-252	2009/7/3	Y	Y	N		-	DCD_16-252	3	2
		167	16-253	2009/3/23	Y	Y	N		-	DCD_16-253	3	2
		167	16-254	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-255	2009/3/23	Y	Y	N		-			
		167	16-255	2009/7/3	Y	Y	N		-	DCD_16-255	3	2
		167	16-256	2009/3/23	Y	Y	N		-	DCD_16-256	3	2
		167	16-257	2009/3/23	Y	Y	N		-			
		167	16-257	2009/7/3	Y	Y	N		-	DCD_16-257	3	2
		167	16-258	2009/3/23	Y	Y	N		-	DCD_16-258	3	2
		167	16-259	2009/3/23	Y	Y	N		-	DCD_16-259	3	2
		167	16-260	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-261	2009/3/23	Y	Y	N		-	DCD_16-261	3	2
		167	16-262	2009/3/23	Y	Y	N		-			
		167	16-262	2009/7/3	Y	Y	N		-	DCD_16-262	3	2
		167	16-263	2009/3/23	Y	Y	N		-			
		167	16-263	2009/7/3	Y	Y	N		-	DCD_16-263	3	2
		167	16-264	2009/3/23	Y	Y	N		-	DCD_16-264	3	2
		167	16-265	2009/3/23	Y	Y	N		-	DCD_16-265	3	2
		167	16-266	2009/3/23	Y	Y	N		-	DCD_16-266	3	2
		167	16-267	2009/3/23	Y	Y	N		-	DCD_16-267	3	2
		167	16-268	2009/3/23	Y	Y	N		-	DCD_16-268	3	2
		167	16-269	2009/3/23	Y	N	N		-	DCD_16-269	3	2
		167	16-270	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-271	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-272	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-273	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-274	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-275	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-276	2009/3/23	Y	N	N		-			
		167	16-276	2009/7/3	Y	N	N		-	DCD_16-276	3	2
		167	16-277	2009/3/23	Y	Y	N		-			
		167	16-277	2009/7/3	Y	Y	N		-	DCD_16-277	3	2
		167	16-278	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-279	2009/3/23	Y	Y	N		-			
		167	16-279	2009/7/3	Y	Y	N		-	DCD_16-279	3	2
		167	16-280	2009/3/23	N	N	N		-			
		167	16-280	2009/7/3	Y	N	N		-	DCD_16-280	3	2
		167	16-281	2009/3/23	Y	Y	N		-			
		167	16-281	2009/7/3	Y	Y	N		-	DCD_16-281	-	2
		167	16-282	2009/3/23	Y	Y	N		-			
		167	16-282	2009/7/3	Y	Y	N		-	DCD_16-282	-	2
		167	16-283	2009/3/23	Y	Y	N		-	DCD_16-283	3	2
		167	16-284	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-285	2009/3/23	Y	Y	N		-			
		167	16-285	2009/7/3	Y	Y	N		-	DCD_16-285	3	2
		167	16-286	2009/3/23	Y	Y	N		-	DCD_16-286	3	2
		167	16-287	2009/3/23	Y	Y	N		-	DCD_16-287	3	2
		167	16-288	2009/3/23	Y	Y	N		-			
		167	16-288	2009/7/3	Y	Y	N		-	DCD_16-288	3	2
		167	16-289	2009/3/23	Y	Y	N		-			
		167	16-289	2009/7/3	Y	Y	N		-	DCD_16-289	3	2
		167	16-290	2009/3/23	Y	Y	N		-			
		167	16-290	2009/7/3	Y	Y	N		-	DCD_16-290	3	2
		167	16-291	2009/3/23	Y	Y	N		-			
		167	16-291	2009/7/3	Y	Y	N		-	DCD_16-291	3	2
		167	16-292	2009/3/23	Y	Y	N		-			
		167	16-292	2009/7/3	Y	Y	N		-	DCD_16-292	3	2
		167	16-293	2009/3/23	Y	Y	N		-	DCD_16-293	3	2

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		167	16-294	2009/3/23	Y	Y	N		-			
		167	16-294	2009/7/3	Y	Y	N		-	DCD_16-294	3	2
		167	16-295	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-296	2009/3/23	N	N	N		-	-	N/A	N/A
		167	16-297	2009/3/23	Y	Y	N		-			
		167	16-297	2009/7/3	Y	Y	N		-	DCD_16-297	3	2
		399	16-298	2009/7/13	N	N	N		-	-	N/A	N/A
		399	16-298	2010/12/22	Y	N	N		-	DCD_16-298	0	4
		399	16-298	2011/5/30	Y	Y	N		-	-	N/A	N/A
		399	16-298	2011/10/6	Y	Y	N		-	DCD_16-298	-	4
		463	16-299	10/28/2009	N	N	N		-	-	N/A	N/A
		520	16-300	2010/2/18	Y	Y	N		-	DCD_16-300	2	3
		590	16-301	2010/7/12	Y	Y	N		-	DCD_16-301	4	3
		674	16-302	2011/1/18	Y	Y	N		-	DCD_16-302	0	4
		747	16-303	2011/5/27	Y	Y	N		-	DCD_16-303	0	4
		816	16-304	2011/9/16	Y	Y	N		-	DCD_16-304	1	4
		1058	16-305	12/4/2013	Y	Y	N		-	DCD_16-305	0	
		1059	16-306	12/26/2013	Y	N	N		-	DCD_16-306	0	
		1071	16-306	2/27/2014	Y	Y	N		-	DCD_16-306	0	
		1059	16-307	12/26/2013	Y	N	N		-	DCD_16-307	0	
		1059	16-308	12/26/2013	Y	N	N		-	DCD_16-308	0	
16.2	SLs, Reactivity,											
	Core Op Limits, & Special Ops:											
	Technical Specifications											
16.3	Instrumentation:	36	01-1	2008/8/22	Y	N	N	fin.	-	DCD_16.3_01-1	-	1
	Technical Specifications	72	16-1	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-2	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-3	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-4	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-5	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-6	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-7	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-8	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-9	2008/10/8	Y	Y	N	fin.	-	DCD_16-9	0	2
		72	16-10	2008/10/8	N	N	N	fin.	-	-	N/A	N/A
		72	16-11	2008/10/8	N	N	N	fin.	-	-	N/A	N/A

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
16.4	RCS & ECCS: Technical Specifications	135	16-48	2009/2/4	Y	Y	N		-	DCD_16-48	1	2
		135	16-49	2009/2/4	Y	Y	N		-	DCD_16-49	1	2
		135	16-50	2009/2/4	Y	Y	N		-	DCD_16-50	1	2
		135	16-51	2009/2/4	Y	Y	N		-	DCD_16-51	1	2
		135	16-52	2009/2/4	Y	Y	N		-	DCD_16-52	1	2
		135	16-53	2009/2/4	N	N	N		-	-	N/A	N/A
		135	16-54	2009/2/4	Y	Y	N		-	DCD_16-54	1	2
		135	16-55	2009/2/4	Y	Y	N		-	DCD_16-55	1	2
		135	16-56	2009/2/4	Y	Y	N		-	DCD_16-56	1	2
		135	16-57	2009/2/4	Y	Y	N		-	DCD_16-57	1	2
		135	16-58	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-66	2009/2/4	Y	Y	N		-	DCD_16-66	1	2
		146	16-67	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-68	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-69	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-70	2009/2/4	Y	Y	N		-	DCD_16-70	1	2
		146	16-71	2009/2/4	Y	Y	N		-	DCD_16-71	1	2
		146	16-72	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-73	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-74	2009/2/4	Y	N	N		-	DCD_16-74	1	2
		146	16-75	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-76	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-77	2009/2/4	Y	Y	N		-	DCD_16-77	1	2
		146	16-78	2009/2/4	Y	Y	N		-	DCD_16-78	1	2
		146	16-79	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-80	2009/2/4	Y	Y	N		-	DCD_16-80	1	2
		146	16-81	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-82	2009/2/4	Y	Y	N		-	DCD_16-82	1	2
		146	16-83	2009/2/4	Y	Y	N		-	DCD_16-83	1	2
		146	16-84	2009/2/4	Y	Y	N		-	DCD_16-84	1	2
		146	16-85	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-86	2009/2/4	Y	Y	N		-	DCD_16-86	1	2
		146	16-87	2009/2/4	Y	Y	N		-	DCD_16-87	1	2
		146	16-88	2009/2/4	Y	Y	N		-	DCD_16-88	1	2
		146	16-89	2009/2/4	Y	Y	N		-	DCD_16-89	1	2
		146	16-90	2009/2/4	N	N	N		-	-	N/A	N/A
		146	16-91	2009/2/4	Y	Y	N		-	DCD_16-91	1	2
		146	16-92	2009/2/4	Y	Y	N		-	DCD_16-92	1	2
		146	16-93	2009/2/4	Y	Y	N		-	DCD_16-93	1	2
		146	16-94	2009/2/4	Y	Y	N		-	DCD_16-94	1	2
		146	16-95	2009/2/4	Y	Y	N		-	DCD_16-95	1	2
		146	16-96	2009/2/4	Y	Y	N		-	DCD_16-96	1	2
		146	16-97	2009/2/4	Y	Y	N		-	DCD_16-97	1	2
		146	16-98	2009/2/4	N	N	N		-	-	N/A	N/A
X		146	16-99	2009/2/4	Y	Y	N		-	DCD_16-99	2	2
		158	16-100	2009/2/20	Y	Y	N		-	DCD_16-100	1	2
		158	16-101	2009/2/20	N	N	N		-	-	N/A	N/A
		158	16-102	2009/2/20	N	N	N		-	-	N/A	N/A
		158	16-103	2009/2/20	N	N	N		-	-	N/A	N/A
		158	16-104	2009/2/20	N	N	N		-	-	N/A	N/A
				2009/6/22	Y	Y	N		-	DCD_16-104	3	
		158	16-105	2009/2/20	Y	Y	N		-	DCD_16-105	1	2
		158	16-106	2009/2/20	Y	Y	N		-	DCD_16-106	1	2
		158	16-107	2009/2/20	Y	Y	N		-	DCD_16-107	2	2
		158	16-108	2009/2/20	Y	Y	N		-	DCD_16-108	1	2
		158	16-109	2009/2/20	Y	Y	N		-	DCD_16-109	1	2
		158	16-110	2009/2/20	N	N	N		-	-	N/A	N/A
		158	16-111	2009/2/20	Y	Y	N		-	DCD_16-111	1	2
		158	16-112	2009/2/20	Y	Y	N		-	DCD_16-112	1	2
		158	16-113	2009/2/20	N	N	N		-	-	N/A	N/A
		158	16-114	2009/2/20	Y	Y	N		-	DCD_16-114	1	2
		OI	16-146-1804/79	10/14/2009	N	N	N		-	-	N/A	N/A
		OI	16-135-1818/51	10/14/2009	Y	Y	N		-	DCD_16-135-1818/51	0	3
		OI	16-135-1818/53	10/14/2009	Y	Y	N		-	DCD_16-135-1818/53	0	3
		OI	16-2.4-50	10/16/2009	N	N	N		-		N/A	N/A

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		OI	16-9.2.1-26	10/14/2009	N	N	N		-		N/A	N/A
		OI	16-133-1827/136	10/16/2009	N	N	N		-		N/A	N/A
		OI	16-133-1827/15	2009/10/28	Y	Y	N		-	DCD_16-133-1827/15	0	3
		OI	16-133-1827/20	2009/10/28	N	N	N		-	-	N/A	N/A
		OI	16-1769/284	10/28/2009	N	N	N		-	-	N/A	N/A
		OI	16-1784/172	11/10/2009	Y	Y	N		-	DCD_16-1784/172	1	3
		OI	16-1784/174	11/10/2009	Y	Y	N		-	DCD_16-1784/174	1	3
		OI	16-1784/186	11/10/2009	Y	Y	N		-	DCD_16-1784/186	-	2
		OI	16-1784/188	11/10/2009	Y	Y	N		-	DCD_16-1784/188	1	3
		OI	16-1784/192	11/10/2009	Y	Y	N		-	DCD_16-1784/192	-	2
		OI	16-1769/209	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/220	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/228	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/230	11/10/2010	N	N	N		-	-	N/A	N/A
		OI	16-1769/231	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/232	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/233	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/238	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/241	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/242	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/270	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/271	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/272	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/273	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/274	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/275	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-1769/282	11/10/2009	Y	Y	N		-	DCD_16-1769/282	-	2
		OI	16-1769/290	11/10/2009	N	N	N		-	-	N/A	N/A
		OI	16-134-1825/26	10/30/2009	Y	Y	N		-	DCD_16-134-1825/26	0	3
		OI	16-134-1825/27	10/30/2009	N	N	N		-	-	N/A	N/A
		OI	16-72-853	10/30/2009	Y	Y	N		-	DCD_16-72-853	0	3
16.5	Containment Systems:	136	16-59	2009/2/4	Y	Y	N		-	DCD_16-59	1	2
	Technical Specifications	136	16-60	2009/2/4	Y	Y	N		-	DCD_16-60	1	2
				2009/6/16	Y	Y	N		-	DCD_16-60	3	2
		136	16-61	2009/2/4	Y	Y	N		-	DCD_16-61	1	2
		136	16-62	2009/2/4	N	N	N		-	-	N/A	N/A
		136	16-63	2009/2/4	Y	N	N		-	DCD_16-63	1	2
		136	16-64	2009/2/4	Y	Y	N		-	DCD_16-64	1	2
		136	16-65	2009/2/4	Y	Y	N		-	DCD_16-65	1	2

Chapter 16

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	cc	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
16.6	Electrical Power Sys:	134	16-21	2009/2/4	Y	Y	N		-	DCD_16-21	1	2
	Technical Specifications	134	16-22	2009/2/4	Y	Y	N		-	DCD_16-22	1	2
		134	16-23	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-24	2009/2/4	Y	Y	N		-	DCD_16-24	1	2
		134	16-25	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-26	2009/2/4	Y	Y	N		-	DCD_16-26	1	2
		134	16-27	2009/2/4	Y	Y	N		-	DCD_16-27	1	2
		134	16-28	2009/2/4	Y	Y	N		-	DCD_16-28	1	2
		134	16-29	2009/2/4	Y	Y	N		-	DCD_16-29	1	2
		134	16-30	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-31	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-32	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-33	2009/2/4	Y	Y	N		-	DCD_16-33	1	2
		134	16-34	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-35	2009/2/4	Y	Y	N		-	DCD_16-35	1	2
		134	16-36	2009/2/4	Y	Y	N		-	DCD_16-36	1	2
		134	16-37	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-38	2009/2/4	Y	Y	N		-	DCD_16-38	1	2
		134	16-39	2009/2/4	Y	Y	N		-	DCD_16-39	1	2
		134	16-40	2009/2/4	Y	Y	N		-	DCD_16-40	1	2
		134	16-41	2009/2/4	Y	Y	N		-	DCD_16-41	1	2
		134	16-42	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-43	2009/2/4	Y	Y	N		-	DCD_16-43	1	2
		134	16-44	2009/2/4	N	N	N		-	-	N/A	N/A
		134	16-45	2009/2/4	Y	Y	N		-	DCD_16-45	1	2
		134	16-46	2009/2/4	Y	Y	N		-	DCD_16-46	1	2
		134	16-47	2009/2/4	Y	Y	N		-	DCD_16-47	2	2

Chapter:17

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
17.1	Quality Assurance											
	During the Design and											
	Construction Phases											
17.4	Reliability Assurance Program	101	17.04-1	2008/12/12	Y	N	N	fin.	-	DCD_17.04-1	-	2
	(RAP)	101	17.04-2	2008/12/12	Y	N	N	fin.	-	DCD_17.04-2	-	2
		101	17.04-3	2008/12/12	Y	N	N	fin.	-	DCD_17.04-3	-	2
		101	17.04-4	2008/12/12	Y	N	N	fin.	-	DCD_17.04-4	2	2
		101	17.04-5	2008/12/12	Y	N	N	fin.	-	DCD_17.04-5	-	2
		101	17.04-6	2008/12/12	Y	N	N	fin.	-	DCD_17.04-6	1	2
		101	17.04-7	2008/12/12	Y	N	N	fin.	-	DCD_17.04-7	1	2
		101	17.04-8	2008/12/12	Y	N	N	fin.	-	DCD_17.04-8	1	2
		101	17.04-9	2008/12/12	Y	N	N	fin.	-	DCD_17.04-9	-	2
		101	17.04-10	2008/12/12	Y	N	N	fin.	-	DCD_17.04-10	1	2
		101	17.04-11	2008/12/12	Y	N	N	fin.	-	DCD_17.04-11	1	2
		101	17.04-12	2008/12/12	Y	N	N	fin.	-	DCD_17.04-12	1	2
		101	17.04-13	2008/12/12	Y	N	N	fin.	-	DCD_17.04-13	2	2
		101	17.04-14	2008/12/12	Y	N	N	fin.	-	DCD_17.04-14	1	2
		101	17.04-15	2008/12/12	Y	N	N	fin.	-	DCD_17.04-15	-	2
		101	17.04-16	2008/12/12	N	N	N	fin.	-	-	N/A	N/A
		101	17.04-17	2008/12/12	N	N	N	fin.	-	-	N/A	N/A
		101	17.04-18	2008/12/12	Y	N	N	fin.	-	DCD_17.04-18	-	2
		150	17.04-19	2009/3/10	Y	N	N		-	DCD_17.04-19	2	2
		150	17.04-20	2009/3/10	N	N	N		-	-	N/A	N/A
		150	17.04-21	2009/2/6	Y	N	N		-	DCD_17.04-21	1	2
		150	17.04-22	2009/2/6	Y	N	N		-	DCD_17.04-22	1	2
		150	17.04-23	2009/3/10	Y	N	N		-	DCD_17.04-23	2	2
		150	17.04-24	2009/3/10	Y	N	N		-	DCD_17.04-24	2	2
		150	17.04-25	2009/2/6	Y	N	N		-	DCD_17.04-25	1	2
		150	17.04-26	2009/2/6	Y	N	N		-	DCD_17.04-26	1	2
		150	17.04-27	2009/2/6	Y	N	N		-	DCD_17.04-27	1	2
		150	17.04-28	2009/2/6	Y	N	N		-	DCD_17.04-28	1	2
		150	17.04-29	2009/2/6	Y	N	N		-	DCD_17.04-29	-	2
		150	17.04-30	2009/3/10	Y	N	N		-	DCD_17.04-30	2	2
		150	17.04-31	2009/2/6	N	N	N		-	-	N/A	N/A
		150	17.04-32	2009/2/6	Y	N	N		-	DCD_17.04-32	1	2
		150	17.04-33	2009/2/6	Y	N	N		-	DCD_17.04-33	1	2
		150	17.04-34	2009/2/6	Y	N	N		-	DCD_17.04-34	1	2
		150	17.04-35	2009/2/6	N	N	N		-	-	N/A	N/A
		175	17.04-36	2009/3/3	Y	N	N		-	DCD_17.04-36	2	2
		175	17.04-37	2009/4/3	Y	N	N		-	DCD_17.04-37	2	2
		175	17.04-38	2009/4/3	Y	N	N		-	DCD_17.04-38	2	2
		175	17.04-39	2009/3/3	Y	N	N		-	DCD_17.04-39	2	2
		385	17.04-40	2009/7/10	Y	N	N		-	DCD_17.04-40	-	2
		385	17.04-41	2009/7/10	Y	N	N		-	DCD_17.04-41	-	2
		385	17.04-42	2009/7/10	Y	N	N		-	DCD_17.04-42	-	2
		385	17.04-43	2009/7/10	Y	N	N		-	DCD_17.04-43	-	2
		385	17.04-44	2009/7/10	Y	N	N		-	DCD_17.04-44	-	2
		385	17.04-45	2009/7/10	Y	N	N		-	DCD_17.04-45	-	2
		398	17.04-46	2009/7/18	Y	N	N		-	DCD_17.04-46	-	2
		398	17.04-47	2009/7/18	Y	N	N		-	DCD_17.04-47	-	2
		398	17.04-48	2009/7/18	Y	N	N		-	DCD_17.04-48	-	2
		398	17.04-49	2009/7/18	Y	N	N		-	DCD_17.04-49	-	2
		606	17.4-50	2010/9/3	Y	N	N		-	DCD_17.4-50	-	3
		606	17.4-51	2010/9/3	Y	Y	N		-	DCD_17.4-51	-	3
		606	17.4-52	2010/9/3	Y	N	N		-	DCD_17.4-52	-	3
		606	17.4-53	2010/9/3	Y	N	N		-	DCD_17.4-53	-	3
		606	17.4-54	2010/9/3	N	N	N		-	-	N/A	N/A
		606	17.4-55	2010/9/3	Y	N	N		-	DCD_17.4-55	-	3
		606	17.4-56	2010/9/3	Y	N	N		-	DCD_17.4-56	-	3
		606	17.4-56	2013/4/15	Y	N	N		-	DCD_17.4-56	4	4
		606	17.4-57	2010/9/3	Y	N	N		-	-	N/A	N/A

Chapter:17

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		606	17.4-58	2010/9/3	Y	N	N		-	-	N/A	N/A
		891	17.04-59	04/23/2012	Y	N	N		-	DCD_17.04-59	3	4
		891	17.04-60	04/23/2012	Y	N	N		-	DCD_17.04-60	3	4
		891	17.04-61	04/23/2012	Y	N	N		-	DCD_17.04-61	3	4
		891	17.04-62	04/23/2012	N	N	N		-	-	N/A	N/A
		891	17.04-63	04/23/2012	Y	N	N		-	DCD_17.04-63	3	4
		891	17.04-64	04/23/2012	Y	N	N		-	DCD_17.04-64	3	4
		891	17.04-65	04/23/2012	Y	N	N		-	DCD_17.04-65	3	4
		891	17.04-66	04/23/2012	Y	N	N		-	DCD_17.04-66	3	4
		891	17.04-66	6/11/2012	Y	N	N		-	DCD_17.04-66	3	4
		891	17.04-67	04/23/2012	Y	N	N		-	DCD_17.04-67	3	4
		891	17.04-67	6/11/2012	Y	N	N		-	DCD_17.04-67	3	4
		891	17.04-68	04/23/2012	Y	N	N		-	DCD_17.04-68	3	4
17.5	Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants											
17.6	Maintenance Rule	137	17.06-1	2009/1/21	Y	N	N		-	DCD_17.06-1	1	2

Chapter:18

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
18.1	HFE Program Management	281	18-6	2009/3/31	Y	N	N		-	DCD_18.6	2	2
		295	18-7	2009/4/28	Y	N	N		-	DCD_18.7	-	2
		295	18-8	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-9	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-10	2009/4/28	Y	N	N		-	DCD_18.10	3	2
		295	18-11	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-12	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-13	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-14	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-15	2009/4/28	Y	N	N		-	DCD_18.15	3	2
		295	18-16	2009/4/28	N	N	N		-	-	N/A	N/A
		295	18-17	2009/4/28	Y	N	N		-	DCD_18.17	3	2
		295	18-18	2009/4/28	Y	N	N		-	DCD_18.18	3	2
		295	18-19	2009/4/28	N	N	N		-	-	N/A	N/A
		728	18-106	4/28/2011	Y	N	N		-	DCD_18-106	0	4
		728	18-106	5/12/2011	Y	N	N		-	DCD_18-106	-	4
		728	18-107	4/28/2011	Y	N	N		-	DCD_18-107	0	4
		728	18-107	5/12/2011	Y	N	N		-	-	-	4
		728	18-108	4/28/2011	Y	N	N		-	DCD_18-108	0	4
		728	18-108	5/12/2011	Y	N	N		-	-	-	4
		728	18-109	4/28/2011	Y	N	N		-	DCD_18-109	0	4
		728	18-109	5/12/2011	Y	N	N		-	DCD_18-109	-	4
		728	18-110	4/28/2011	Y	N	N		-	-	N/A	N/A
		728	18-110	5/12/2011	Y	N	N		-	DCD_18-110	0	4
		728	18-111	4/28/2011	Y	N	N		-	-	N/A	N/A
		728	18-111	5/12/2011	Y	N	N		-	-	-	4
		728	18-112	4/28/2011	N	N	N		-	-	N/A	N/A
				5/12/2011	N	N	N		-	-	-	4
		728	18-113	5/12/2011	N	N	N		-	-	N/A	N/A
		728	18-114	4/28/2011	Y	N	N		-	DCD_18-114	0	4
		728	18-114	5/12/2011	Y	N	N		-	DCD_18-115	-	4
		755	18-115	5/31/2011	N	N	N		-	-	N/A	N/A
		755	18-116	5/31/2011	Y	N	N		-	DCD_18-116	0	4
		755	18-117	5/31/2011	Y	N	N		-	DCD_18-117	0	4
		755	18-118	5/31/2011	N	N	N		-	-	N/A	N/A
		755	18-119	5/31/2011	N	N	N		-	-	N/A	N/A
		756	18-120	5/31/2011	Y	N	N		-	DCD_18-120	0	4
		780	18-129	8/19/2011	Y	N	N		-	DCD_18-129	1	4
		1008	18-252	12/11/2013	Y	N	N		-	-	N/A	N/A
		1008	18-253	12/11/2013	Y	N	N		-	-	N/A	N/A
		1008	18-254	12/11/2013	Y	N	N		-	-	N/A	N/A
		1072	18-258	2/28/2014	N	N	N		-	-	N/A	N/A
		1072	18-259	2/28/2014	N	N	N		-	-	N/A	N/A
		1072	18-260	2/28/2014	N	N	N		-	-	N/A	N/A
		1072	18-261	2/28/2014	N	N	N		-	-	N/A	N/A
		1072	18-262	2/28/2014	N	N	N		-	-	N/A	N/A
		1072	18-263	2/28/2014	N	N	N		-	-	N/A	N/A
		1074	18-265	3/6/2014	N	N	N		-	-	N/A	N/A

Chapter:18

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
18.2	Operating Experience Review	77	18.3	2008/11/4	N	N	N	fin.	-	-	N/A	N/A
		368	18-45	2009/6/8	N	N	N		-	-	N/A	N/A
		368	18-46	2009/6/8	N	N	N		-	-	N/A	N/A
		406	18-48	2009/7/24	N	N	N		-	-	N/A	N/A
		410	18-49	2009/7/24	N	N	N		-	-	N/A	N/A
		529	18-66	2010/3/1	N	N	N		-	-	N/A	N/A
		529	18-67	2010/3/1	Y	N	N		-	DCD_18-67	3	3
		529	18-68	2010/3/1	N	N	N		-	-	N/A	N/A
		820	18-186	2011/9/29	N	N	N		-	-	N/A	N/A
18.3	Functional Requirements Analysis	336	18-28	2009/5/27	N	N	N		-	-	N/A	N/A
	and Function Allocation	336	18-29	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-30	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-31	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-32	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-33	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-34	2009/5/27	N	N	N		-	-	N/A	N/A
		336	18-35	2009/5/27	N	N	N		-	-	N/A	N/A
		594	18-69	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-70	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-71	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-72	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-73	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-74	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-75	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-76	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-77	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-78	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-79	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-80	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-81	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-82	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-83	2010/7/9	N	N	N		-	-	N/A	N/A
		594	18-84	2010/7/9	N	N	N		-	-	N/A	N/A
		793	18-141	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-142	12/16/2011	Y	N	N		-	DCD_18-142	1	4
		793	18-143	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-144	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-145	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-146	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-147	12/16/2011	Y	N	N		-	DCD_18-147	1	4
		793	18-148	12/16/2011	N	N	N		-	-	N/A	N/A
		793	18-149	12/16/2011	N	N	N		-	-	N/A	N/A
		1006	18-245	12/1/2013	Y	N	N		-	DCD_18-245	N/A	N/A
		1006	18-246	12/1/2013	Y	N	N		-	DCD_18-246	N/A	N/A
		1006	18-247	12/1/2013	N	N	N		-	-	N/A	N/A

Chapter:18

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
18.4	Task Analysis	342	18-43	2009/6/17	Y	N	N		-	DCD_18-43	3	2
		417	18-64	2009/7/24	Y	N	N		-	DCD_18-64	3	2
		781	18-130	12/15/2011	N	N	N		-	-	N/A	N/A
		781	18-131	12/15/2011	Y	N	N		-	DCD_18-131	1	4
		781	18-132	12/15/2011	Y	N	N		-	DCD_18-132	1	4
		781	18-133	12/15/2011	Y	N	N		-	DCD_18-133	1	4
		781	18-134	12/15/2011	Y	N	N		-	DCD_18-134	1	4
		781	18-135	12/15/2011	Y	N	N		-	DCD_18-135	1	4
		781	18-136	12/15/2011	Y	N	N		-	DCD_18-136	1	4
		781	18-137	12/15/2011	N	N	N		-	-	N/A	N/A
		781	18-138	12/15/2011	Y	N	N		-	DCD_18-138	1	4
		781	18-139	12/15/2011	Y	N	N		-	DCD_18-139	1	4
18.5	Staffing and Qualifications	75	18.1	2008/11/4	N	N	N	fin.	-	-	N/A	N/A
		76	18.2	2008/11/4	N	N	N	fin.	-	-	N/A	N/A
		79	18-4	2008/11/4	N	N	N	fin.	-	-	N/A	N/A
		79	18-5	2008/11/4	N	N	N	fin.	-	-	N/A	N/A
		335	18-27	2009/5/27	N	N	N		-	-	N/A	N/A
		725	18-98	2011/4/27	N	N	N		-	-	N/A	N/A
		725	18-99	2011/4/27	N	N	N		-	-	N/A	N/A
		725	18-100	2011/4/27	Y	N	N		-	DCD_18-100	0	4
		725	18-101	2011/4/27	N	N	N		-	-	N/A	N/A
		725	18-102	2011/4/27	N	N	N		-	-	N/A	N/A
		725	18-103	2011/4/27	Y	N	N		-	DCD_18-103	0	4
		725	18-104	2011/4/27	N	N	N		-	-	N/A	N/A
		725	18-105	2011/4/27	N	N	N		-	-	N/A	N/A
		792	18-140	8/25/2011	Y	N	N		-	DCD_18-140	1	4
18.6	Human Reliability Analysis	334	18-24	2009/5/27	N	N	N		-	-	N/A	N/A
		334	18-25	2009/5/27	N	N	N		-	-	N/A	N/A
		334	18-26	2009/5/27	N	N	N		-	-	N/A	N/A
		664	18-94	2010/12/22	N	N	N		-	-	N/A	N/A
		664	18-95	2010/12/22	N	N	N		-	-	N/A	N/A
		664	18-96	2010/12/22	N	N	N		-	-	N/A	N/A
		664	18-97	2010/12/22	N	N	N		-	-	N/A	N/A

Chapter:18

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
18.7	Human-System Interface Design	411	18-50	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-51	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-52	2009/7/24	Y	N	N		-	DCD_18-52	3	2
		412	18-53	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-54	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-55	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-56	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-57	2009/7/24	Y	N	N		-	DCD_18-57	-	2
		412	18-58	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-59	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-60	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-61	2009/7/24	N	N	N		-	-	N/A	N/A
		412	18-62	2009/7/24	Y	N	N		-	DCD_18-57	-	2
		421	18-65	2009/7/24	N	N	N		-	-	N/A	N/A
		595	18-85	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-86	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-87	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-88	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-89	2010/7/9	Y	N	N		-	DCD_18-89	4	3
		595	18-90	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-91	2010/7/9	Y	N	N		-	DCD_18-91	4	3
		595	18-92	2010/7/9	N	N	N		-	-	N/A	N/A
		595	18-93	2010/7/9	N	N	N		-	-	N/A	N/A
		797	18-178	10/27/2011	Y	N	N		-	DCD_18-178	1	4
		797	18-179	10/27/2011	N	N	N		-	-	N/A	N/A
		797	18-180	10/27/2011	N	N	N		-	-	N/A	N/A
		797	18-181	10/27/2011	N	N	N		-	-	N/A	N/A
		797	18-182	10/27/2011	Y	N	N		-	DCD_18-182	1	4
		797	18-183	10/27/2011	N	N	N		-	-	N/A	N/A
		797	18-184	10/27/2011	N	N	N		-	-	N/A	N/A
		797	18-185	10/27/2011	Y	N	N		-	DCD_18-185	1	4
18.8	Procedure Development											
		344	18-37	2009/6/18	Y	N	N		-	DCD_18.37	3	2
		344	18-38	2009/6/18	N	N	N		-	-	N/A	N/A
		344	18-39	2009/6/18	N	N	N		-	-	N/A	N/A
		344	18-40	2009/6/18	N	N	N		-	-	N/A	N/A
		344	18-41	2009/6/18	Y	N	N		-	DCD_18.41	3	2
		344	18-42	2009/6/18	Y	N	N		-	DCD_18.42	3	2
		367	18-44	2009/6/8	N	N	N		-	-	N/A	N/A
		792	18-140	8/25/2011	Y	N	N		-	DCD_18-140	1	4
		844	18-188	10/21/2011	Y	N	N		-	DCD_18-188	1	4
18.9	Training Program Development	339	18-36	2009/6/2	N	N	N		-	-	N/A	N/A
		370	18-47_1	2009/6/17	Y	N	N		-	DCD_18-47_1	3	2
		370	18-47_2	2009/6/17	N	N	N		-	-	N/A	N/A
		370	18-47_3	2009/6/17	N	N	N		-	-	N/A	N/A
		370	18-47_4	2009/6/17	N	N	N		-	-	N/A	N/A
		370	18-47_5	2009/6/17	N	N	N		-	-	N/A	N/A
		370	18-47_6	2009/6/17	Y	N	N		-	DCD_18-47_6	3	2
		370	18-47_7	2009/6/17	Y	N	N		-	DCD_18-47_7	3	2

Chapter:18

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
18.10	Human Factors	413	18-63	2009/7/24	N	N	N		-	-	N/A	N/A
	Verification and Validation											
		796	18-150	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-151	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-152	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-153	2/16/2012	Y	N	N		-	DCD_18-153	2	4
		796	18-154	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-155	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-156	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-157	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-158	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-159	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-160	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-161	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-162	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-163	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-164	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-165	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-166	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-167	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-168	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-169	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-170	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-171	2/16/2012	Y	N	N		-	DCD_18-150	2	4
		796	18-172	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-173	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-174	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-175	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-176	2/16/2012	N	N	N		-	-	N/A	N/A
		796	18-177	2/16/2012	Y	N	N		-	DCD_18-177	2	4
18.11	Design Implementation	333	18-21	2009/5/27	N	N	N		-	-	N/A	N/A
		333	18-22	2009/5/27	N	N	N		-	-	N/A	N/A
		333	18-23	2009/5/27	N	N	N		-	-	N/A	N/A
18.12	Human Performance Monitoring	332	18-20	2009/5/27	N	N	N		-	-	N/A	N/A
		777	18-121	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-122	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-123	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-124	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-125	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-126	08/24/2011	Y	N	N		-	DCD_18-126	1	4
		777	18-127	08/24/2011	N	N	N		-	-	N/A	N/A
		777	18-128	08/24/2011	Y	N	N		-	DCD_18-128	1	4
		843	18-187	10/21/2011	Y	N	N		-	DCD_18-187	1	4
18.13	Minimum Inventory											

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
19	Probabilistic Risk Assessment	1	19-1	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
	and Severe Accident Evaluation	1	19-2	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
	for New Reactors	1	19-3	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-4	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-5	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-6	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-7	2008/5/16	Y	Y	N	fin.	-	DCD_19-7	-	1
		1	19-8	2008/6/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-9	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-10	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-11	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-12	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-13	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-14	2008/5/16	N		N	fin.	-	-	N/A	N/A
		1	19-15	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-16	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-17	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-18	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-19	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-20	2008/6/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-21	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-22	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-23	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-24	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-25	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-26	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		1	19-27	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
		25	19-28	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-29	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-30	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-31	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-32	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-33	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-34	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-35	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-36	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-37	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-38	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-39	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-40	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-41	2008/7/25	N	N	N	fin.	-	-	N/A	N/A
		25	19-42	2008/7/25	N	N	Y	fin.	-	-	N/A	N/A
		25	19-43	2008/7/25	Y	N	N	fin.	-	DCD_19-43	-	2
		39	19-44	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-45	2008/11/11	N	N	Y	fin.	-	-	N/A	N/A
		39	19-46	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-47	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-48	2008/8/28	Y	Y	N	fin.	-	DCD_19-48	-	1
		39	19-49	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-50	2008/8/28	Y	Y	N	fin.	-	DCD_19-50	-	2
		39	19-51	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-52	2008/8/28	Y	Y	Y	fin.	-	DCD_19-52	-	2
		39	19-53	2008/8/28	Y	Y	N	fin.	-	DCD_19-53	-	2
		39	19-54	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-55	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-56	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-57	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-58	2008/8/28	Y	Y	N	fin.	-	DCD_19-58	-	2
		39	19-59	2008/8/28	Y	Y	N	fin.	-	DCD_19-59	-	2
		39	19-60	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-61	2008/8/28	Y	Y	N	fin.	-	DCD_19-61	1	2
		39	19-62	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-63	2008/8/28	Y	Y	N	fin.	-	DCD_19-63	-	2
		39	19-64	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-65	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-66	2008/8/28	Y	Y	N	fin.	-	DCD_19-66	-	2
		39	19-67	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-68	2008/9/25	Y	Y	Y	fin.	-	DCD_19-68	-	2

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		39	19-69	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-70	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-71	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-72	2008/8/28	Y	Y	N	fin.	-	DCD_19-72	-	2
		39	19-73	2008/8/28	N	N	N	fin.	-			
		39	19-73	2009/1/9	Y	N	N	fin.	-	DCD_19-73	-	2
		39	19-74	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-75	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		39	19-76	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		39	19-77	2008/9/25	Y	N	N	fin.	-	DCD_19-77	-	2
		39	19-78	2008/9/25	N	N	N	fin.	-	-	N/A	N/A
		35	19-79	2008/8/22	N	N	Y	fin.	-	-	N/A	N/A
		35	19-80	2008/8/22	N	N	Y	fin.	-	-	N/A	N/A
		35	19-81	2008/8/22	N	N	Y	fin.	-	-	N/A	N/A
		35	19-82	2008/8/22	N	N	Y	fin.	-	-	N/A	N/A
		35	19-83	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		35	19-84	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		35	19-85	2008/8/22	N	N	N	fin.	-	-	N/A	N/A
		40	19-86	2008/8/28	Y	Y	N	fin.	-	DCD_19-86	-	2
		40	19-87	2008/8/28	Y	Y	N	fin.	-	DCD_19-87	1	2
		40	19-88	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-89	2008/8/28	Y	Y	N	fin.	-	DCD_19-89	1	2
		40	19-90	2008/9/25	Y	Y	N	fin.	-	DCD_19-90	3	2
		40	19-91	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-92	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-93	2008/8/28	Y	Y	N	fin.	-	DCD_19-93	3	2
		40	19-94	2008/8/28	Y	Y	N	fin.	-	DCD_19-94	1	2
		40	19-95	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-96	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-97	2008/8/28	Y	Y	N	fin.	-	DCD_19-97	1	2
		40	19-98	2008/8/28	Y	Y	N	fin.	-	DCD_19-98	3	2
		40	19-99	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		40	19-100	2008/8/28	N	N	N	fin.	-	-	N/A	N/A
		53	19-101	2008/9/18	Y	N	Y	fin.	-	DCD_19-101	1	2
		53	19-102	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		53	19-103	2008/9/18	N	N	Y	fin.	-	-	N/A	N/A
		53	19-104	2008/9/18	N	N	Y	fin.	-	-	N/A	N/A
		53	19-105	2008/9/18	N	N	Y	fin.	-	-	N/A	N/A
		56	19-106	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		56	19-107	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		56	19-108	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		56	19-109	2008/9/18	N	N	N	fin.	-	-	N/A	N/A
		56	19-110	2008/9/18	N	N	Y	fin.	-	-	N/A	N/A
		69	19-111	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		69	19-112	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		69	19-113	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		69	19-114	2008/10/7	N	N	N	fin.	-	-	N/A	N/A
		69	19-115	2008/10/7	Y	N	N	fin.	-	DCD_19-115	-	2
		81	19-116	2008/11/5	N	N	N	fin.	-	-	N/A	N/A
		81	19-117	2008/11/5	N	N	N	fin.	-	-	N/A	N/A
		81	19-118	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-119	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-120	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-121	2008/11/5	N	N	N	fin.	-	-	N/A	N/A
		81	19-122	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-123	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-124	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-125	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-126	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		81	19-127	2008/11/5	N	N	Y	fin.	-	-	N/A	N/A
		86	19-128	2008/11/19	N	N	N	fin.	-	-	N/A	N/A
		86	19-129	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-130	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-131	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-132	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-133	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-134	2008/11/19	N	N	Y	fin.	-	-	N/A	N/A
		86	19-135	2008/11/19	Y	N	Y	fin.	-	DCD_19-135	-	2

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		88	19-136	2008/11/27	N	N	N	fin.	-	-	N/A	N/A
		88	19-137	2008/11/27	Y	N	N	fin.	-	DCD_19-137	-	2
		88	19-138	2009/1/9	N	N	N	fin.	-		N/A	N/A
		88	19-139	2009/1/9	N	N	N	fin.	-		N/A	N/A
		88	19-140	2009/1/9	Y	N	N		-	DCD_19-140	-	2
		88	19-141	2009/1/9	Y	N	N	fin.	-	DCD_19-141	1	2
		88	19-142	2009/1/9	Y	N	N	fin.	-	DCD_19-142	1	2
		88	19-143	2008/11/27	N	N	N	fin.	-	-	N/A	N/A
		88	19-144	2009/1/9	Y	N	N	fin.	-	DCD_19-144	1	2
		88	19-145	2009/1/9	N	N	N	fin.	-	-	N/A	N/A
		88	19-146	2008/11/27	N	N	N	fin.	-	-	N/A	N/A
		88	19-147	2009/1/9	Y	N	N	fin.	-	DCD_19-147	-	2
		88	19-148	2008/11/27	N	N	N	fin.	-	-	N/A	N/A
		88	19-149	2009/1/9	N	N	N	fin.	-		N/A	N/A
		88	19-150	2008/11/27	Y	N	N	fin.	-	DCD_19-150	-	2
		92	19-151	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-152	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-153	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-154	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-155	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-156	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-157	2008/12/5	Y	N	N	fin.	-	DCD_19-157	0	2
		92	19-158	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-159	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-160	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-161	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-162	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-163	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-164	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-165	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-166	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-167	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-168	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-169	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-170	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-171	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-172	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-173	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-174	2008/12/5	Y	N	N	fin.	-	DCD_19-174	1	2
		92	19-175	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-176	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-177	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-178	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-179	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-180	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-181	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		92	19-182	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		97	19-183	2008/12/8	N	N	N	fin.	-	-	N/A	N/A
		97	19-184	2008/12/8	N	N	Y	fin.	-	-	N/A	N/A
		97	19-185	2008/12/8	Y	N	N	fin.	-	DCD_19-185	-	2
		97	19-186	2008/12/8	N	N	N	fin.	-	-	N/A	N/A
		97	19-187	2008/12/8	N	N	N	fin.	-	-	N/A	N/A
		97	19-188	2008/12/8	N	N	Y	fin.	-	-	N/A	N/A
		97	19-189	2008/12/8	N	N	Y	fin.	-	-	N/A	N/A
		97	19-190	2008/12/8	N	N	N	fin.	-	-	N/A	N/A
		97	19-191	2008/12/8	N	N	N	fin.	-	-	N/A	N/A
		98	19-192	2008/12/5	N	N	N	fin.	-	-	N/A	N/A
		98	19-193	2008/12/5	N	N	Y	fin.	-	-	N/A	N/A
		100	19-194	2008/12/11	N	N	Y	fin.	-	-	N/A	N/A
		100	19-195	2008/12/11	N	N	N	fin.	-	-	N/A	N/A
		100	19-196	2008/12/11	N	N	N	fin.	-	-	N/A	N/A
		100	19-197	2008/12/11	N	N	Y	fin.	-	-	N/A	N/A
		100	19-198	2008/12/11	N	N	N	fin.	-	-	N/A	N/A
		100	19-199	2008/12/11	N	N	Y	fin.	-	-	N/A	N/A
		100	19-200	2008/12/11	N	N	N	fin.	-	-	N/A	N/A
		104	19-201	2008/12/19	N	N	N	fin.	-	-	N/A	N/A
		104	19-202	2008/12/19	N	N	Y	fin.	-	-	N/A	N/A
		104	19-203	2008/12/19	N	N	Y	fin.	-	-	N/A	N/A

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		104	19-204	2008/12/19	N	N	Y	fin.	-	-	N/A	N/A
		104	19-205	2008/12/19	Y	N	N	fin.	-	DCD_19-205	-	2
		138	19-206	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-207	2009/3/10	Y	N	Y		-	DCD_19-207	-	2
		138	19-208	2009/3/10	Y	N	Y		-	DCD_19-208	-	2
		138	19-209	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-210	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-211	2009/2/6	Y	N	N		-	DCD_19-211	3	2
		138	19-212	2009/2/6	Y	N	Y		-	DCD_19-212	-	2
		138	19-213	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-214	2009/3/10	Y	N	N		-	DCD_19-214	-	2
		138	19-215	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-216	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-217	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-218	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-219	2009/2/6	Y	N	N		-	DCD_19-219	1	2
		138	19-220	2009/2/6	Y	N	N		-	DCD_19-220	1	2
		138	19-221	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-222	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-223	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-224	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-225	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-226	2009/2/6	Y	N	Y		-	DCD_19-226	-	2
		138	19-227	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-228	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-229	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-230	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-231	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-232	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-233	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-234	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-235	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-236	2009/3/10	Y	N	N		-	DCD_19-236	-	2
		138	19-237	2009/2/6	Y	N	Y		-	DCD_19-237	-	2
		138	19-238	2009/2/6	Y	N	N		-	DCD_19-238	1	2
		138	19-239	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-240	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-241	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-242	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-243	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-244	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-245	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-246	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-247	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-248	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-249	2009/3/10	N	N	N		-	-	N/A	N/A
		138	19-250	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-251	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-252	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-253	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-254	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-255	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-256	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-257	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-258	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-259	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-260	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-261	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-262	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-263	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-264	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-265	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-266	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-267	2009/2/6	N	N	N		-	-	N/A	N/A
		138	19-268	2009/2/6	Y	N	N		-	DCD_19-268	1	2
		138	19-269	2009/2/6	N	N	Y		-	-	N/A	N/A
		138	19-270	2009/2/6	N	N	N		-	-	N/A	N/A
		148	19-271	2009/2/6	Y	Y	N		-	DCD_19-271	1	2

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		148	19-272	2009/2/6	N	N	N		-	-	N/A	N/A
		148	19-273	2009/2/6	N	N	N		-	-	N/A	N/A
		148	19-274	2009/2/6	N	N	Y		-	-	N/A	N/A
		148	19-275	2009/3/10	Y	N	N		-	DCD_19-275	-	2
		148	19-276	2009/2/6	N	N	N		-	-	N/A	N/A
		148	19-277	2009/2/6	Y	N	N		-	DCD_19-277	3	2
		149	19-278	2009/2/6	N	N	N		-	-	N/A	N/A
		149	19-279	2009/2/6	N	N	N		-	-	N/A	N/A
		149	19-280	2009/3/10	N	N	N		-	-	N/A	N/A
		149	19-281	2009/3/10	N	N	N		-	-	N/A	N/A
		149	19-282	2009/2/6	Y	N	N		-	DCD_19-282	1	2
		149	19-283	2009/3/12	Y	N	N		-	DCD_19-283	-	2
		149	19-284	2009/2/6	N	N	N		-	-	N/A	N/A
		151	19-285	2009/3/13	N	N	Y		-	-	N/A	N/A
		151	19-286	2009/3/13	N	N	N		-	-	N/A	N/A
		151	19-287	2009/2/6	N	N	Y		-	-	N/A	N/A
		151	19-290	2009/3/13	N	N	N		-	-	N/A	N/A
		177	19-291	2009/3/5	N	N	N		-	-	N/A	N/A
		178	19-292	2009/4/3	Y	N	Y		-	DCD_19-292	4	2
		178	19-293	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-294	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-295	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-296	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-297	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-298	2009/4/3	N	N	N		-	-	N/A	N/A
		178	19-299	2009/4/3	N	N	N		-	-	N/A	N/A
		197	19-300	2009/3/11	N	N	N		-	-	N/A	N/A
		197	19-301	2009/3/11	N	N	N		-	-	N/A	N/A
		197	19-302	2009/3/11	N	N	N		-	-	N/A	N/A
		197	19-303	2009/4/28	N	N	N		-	-	N/A	N/A
		197	19-304	2009/4/10	N	N	N		-	-	N/A	N/A
		197	19-305	2009/3/11	N	N	N		-	-	N/A	N/A
		266	19-306	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-307	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-308	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-309	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-310	2009/5/8	Y	N	N		-	DCD_19-310	3	2
		266	19-311	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-312	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-313	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-314	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-315	2009/5/8	Y	N	N		-	DCD_19-315	3	2
		266	19-316	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-317	2009/5/8	Y	N	N		-	DCD_19-317	-	2
		266	19-318	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-319	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-320	2009/5/8	N	N	N		-	-	N/A	N/A
		266	19-321	2009/5/8	N	N	N		-	-	N/A	N/A
		364	19-322	2009/6/12	Y	N	Y		-	DCD_19-322	-	2
		364	19-323	2009/6/12	Y	N	N		-	DCD_19-323	3	2
		364	19-324	2009/6/12	Y	N	Y		-	DCD_19-324	-	2
		364	19-325	2009/6/12	N	N	N		-	-	N/A	N/A
		364	19-326	2009/6/12	Y	N	N		-	DCD_19-326	3	2
		364	19-327	2009/6/12	Y	N	N		-	DCD_19-327	3	2
		364	19-328	2009/6/12	N	N	N		-	-	N/A	N/A
		364	19-329	2009/6/12	N	N	Y		-	-	N/A	N/A
		364	19-330	2009/6/12	N	N	N		-	-	N/A	N/A
		364	19-331	2009/6/12	N	N	Y		-	-	N/A	N/A
		364	19-332	2009/6/12	N	N	Y		-	-	N/A	N/A
		364	19-333	2009/6/12	N	N	N		-	-	N/A	N/A
		369	19-334	2009/6/12	Y	N	Y		-	DCD_19-334	-	2
		369	19-335	2009/6/12	Y	N	N		-	DCD_19-335	-	2
		369	19-336	2009/7/10	Y	N	N		-	DCD_19-336	-	2
		369	19-337	2009/6/12	Y	N	N		-	DCD_19-337	3	2
		369	19-338	2009/6/12	Y	N	N		-	DCD_19-338	-	2
		369	19-339	2009/6/12	N	N	N		-	-	N/A	N/A
		369	19-340	2009/7/10	Y	N	N		-	DCD_19-340	-	2
		369	19-341	2009/6/12	Y	N	Y		-	DCD_19-341	3	2

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		369	19-342	2009/7/10	N	N	Y		-	-	N/A	N/A
		369	19-343	2009/6/12	Y	N	N		-	DCD_19-343	-	2
		369	19-344	2009/7/10	Y	N	N		-	DCD_19-344	-	2
		395	19-345	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-346	2009/7/17	Y	N	N		-	DCD_19-346	-	2
		395	19-347	2009/7/17	Y	N	N		-	DCD_19-347	4	2
		395	19-348	2009/7/17	Y	N	N		-	DCD_19-348	4	2
		395	19-349	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-350	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-351	2009/7/17	Y	N	N		-	DCD_19-351	4	2
		395	19-352	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-353	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-354	2009/7/17	N	N	N		-	-	N/A	N/A
		395	19-355	2009/7/17	Y	N	N		-	DCD_19-355	4	2
		395	19-356	2009/7/17	Y	N	N		-	DCD_19-356	-	2
		395	19-357	2009/7/17	Y	N	N		-	DCD_19-357	-	2
		395	19-358	2009/7/17	Y	N	N		-	DCD_19-358	-	2
		423	19-359	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-360	2009/9/7	Y	N	N		-	DCD_19-360	-	2
		423	19-361	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-362	2009/9/7	Y	N	N		-	DCD_19-362	0	3
		423	19-363	2009/9/7	Y	N	N		-	DCD_19-363	0	3
		423	19-364	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-365	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-366	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-367	2009/9/7	Y	N	Y		-	DCD_19-367	-	2
		423	19-368	2009/9/7	Y	N	N		-	DCD_19-368	0	3
		423	19-369	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-370	2009/9/7	Y	N	N		-	DCD_19-370	-	2
		423	19-371	2009/9/7	Y	N	N		-	-	0	3
		423	19-372	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-373	2009/9/7	Y	N	Y		-	DCD_19-373	0	3
		423	19-374	2009/9/7	Y	N	N		-	DCD_19-374	-	2
		423	19-375	2009/9/7	Y	N	N		-	DCD_19-375	1	3
		423	19-376	2009/9/7	Y	N	N		-	DCD_19-376	0	3
		423	19-376	3/14/2013	Y	N	N		-	DCD_19-376	4	4
		423	19-377	2009/9/7	N	N	Y		-	-	N/A	N/A
		423	19-378	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-379	2009/9/7	Y	N	Y		-	DCD_19-379	-	2
		423	19-380	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-381	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-382	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-383	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-384	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-385	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-386	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-387	2009/9/7	Y	N	N		-	DCD_19-387	0	3
		423	19-388	2009/9/7	N	N	N		-	-	N/A	N/A
		423	19-389	2009/9/7	Y	N	N		-	DCD_19-389	-	2
		433	19-390	2009/8/28	N	N	N		-	-	N/A	N/A
		443	19-391	2009/10/1	N	N	N		-	-	N/A	N/A
		443	19-392	2009/10/1	N	N	N		-	-	N/A	N/A
		443	19-393	2009/10/1	Y	N	N		-	DCD_19-393	-	2
		443	19-394	2009/10/1	N	N	N		-	-	N/A	N/A
		443	19-395	2009/10/1	N	N	N		-	-	N/A	N/A
		443	19-396	2009/10/1	Y	N	N		-	DCD_19-396	0	3
		443	19-397	2009/10/1	Y	N	N		-	DCD_19-397	0	3
		454	19-398	2009/10/9	N	N	Y		-	-	N/A	N/A
		454	19-399	2009/10/9	N	N	Y		-	-	N/A	N/A
		454	19-400	2009/10/9	N	N	Y		-	-	N/A	N/A
		454	19-401	2009/10/9	Y	N	Y		-	DCD_19-401	-	2
		479	19-402	2009/11/25	Y	N	N		-	DCD_19-402	1	3
		479	19-403	2009/11/25	Y	N	N		-	DCD_19-403	1	3
		479	19-404	2009/11/25	Y	N	N		-	DCD_19-404	1	3
		479	19-405	2009/11/25	N	N	N		-	-	N/A	N/A
		479	19-406	2009/11/25	N	N	N		-	-	N/A	N/A
		480	19-*** (1)	2009/11/26	N	N	N		-	-	N/A	N/A
		480	19-*** (2)	2009/11/26	N	N	N		-	-	N/A	N/A

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		480	19-*** (3)	2009/11/26	N	N	N		-	-	N/A	N/A
		480	19-*** (4)	2009/11/26	N	N	N		-	-	N/A	N/A
		480	19-*** (5)	2009/11/26	N	N	N		-	-	N/A	N/A
		480	19-*** (6)	2009/11/26	N	N	N		-	-	N/A	N/A
		528	19-407	2010/3/3	Y	N	N		-	DCD_19-407	2	3
		528	19-408	2010/3/3	Y	N	N		-	DCD_19-408	2	3
		528	19-409	2010/3/3	Y	N	N		-	DCD_19-409	2	3
		528	19-410	2010/3/3	Y	N	N		-	DCD_19-410	2	3
		528	19-411	2010/3/3	N	N	N		-	-	N/A	N/A
		528	19-412	2010/3/3	Y	N	N		-	DCD_19-412	3	3
		528	19-413	2010/3/3	Y	N	N		-	DCD_19-413	3	3
		528	19-414	2010/3/3	Y	N	N		-	DCD_19-414	2	3
		528	19-415	2010/3/3	Y	N	N		-	DCD_19-415	2	3
		528	19-416	2010/3/3	Y	N	N		-	DCD_19-416	2	3
		528	19-417	2010/3/3	Y	N	N		-	DCD_19-417	2	3
		528	19-418	2010/3/3	Y	N	N		-	DCD_19-418	2	3
		528	19-419	2010/3/3	Y	N	N		-	DCD_19-419	2	3
		528	19-420	2010/3/3	Y	N	N		-	DCD_19-420	2	3
		528	19-421	2010/3/3	Y	N	N		-	DCD_19-421	3	3
		528	19-422	2010/3/3	Y	N	N		-	DCD_19-422	2	3
		564	19-423	2010/4/28	Y	N	N		-	DCD_19-423	3	3
		564	19-424	2010/4/28	Y	N	N		-	DCD_19-424	3	3
		564	19-425	2010/4/28	Y	N	N		-	DCD_19-425	3	3
		564	19-426	2010/4/28	Y	Y	N		-	DCD_19-426	3	3
		564	19-427	2010/4/28	Y	N	N		-	DCD_19-427	3	3
		564	19-428	2010/4/28	Y	N	N		-	DCD_19-428	3	3
		566	19-429	2010/4/28	Y	N	N		-	DCD_19-429	3	3
			19-430									
			19-431									
			19-432									
			19-433									
			19-434									
			19-435									
		601	19-436	2010/7/26	Y	N	N		-	DCD_19-436	4	3
		601	19-437	2010/7/26	Y	N	N		-	DCD_19-437	4	3
		607	19-438	2010/9/3	Y	N	Y		-	DCD_19-438	5	3
		608	19-439	2010/9/3	Y	N	N		-	DCD_19-439	-	3
		608	19-440	2010/9/3	Y	N	N		-	DCD_19-440	5	3
		609	19-441	2010/9/3	Y	N	N		-	DCD_19-441	-	3
		610	19-442	2010/9/3	N	N	N		-	-	N/A	N/A
		619	19-443	2010/9/10	N	N	N		-	-	N/A	N/A
		622	19-444	2010/9/29	N	N	Y		-	-	N/A	N/A
		622	19-445	2010/9/29	N	N	N		-	-	N/A	N/A
		622	19-446	2010/9/29	N	N	Y		-	-	N/A	N/A
		627	19-447	2010/11/1	Y	N	N		-	DCD_19-447	-	3
		627	19-448	2010/11/29	N	N	N		-	-	N/A	N/A
		627	19-449	2010/11/1	Y	N	Y		-	DCD_19-449	-	3
		627	19-450	2010/11/1	Y	N	Y		-	DCD_19-450	-	3
		627	19-451	2010/11/1	N	N	N		-	-	N/A	N/A
		627	19-452	2010/11/1	N	N	N		-	-	N/A	N/A
		627	19-453	2010/11/1	N	N	N		-	-	N/A	N/A
		627	19-454	11/1/2010	Y	N	N		-	DCD_19-454	5	3
		639	19-455	10/29/2010	Y	N	N		-	DCD_19-455	5	3
		639	19-456	10/29/2010	Y	N	N		-	DCD_19-456	5	3
		639	19-457	10/29/2010	Y	N	N		-	DCD_19-457	5	3
		639	19-458	10/29/2010	Y	N	Y		-	DCD_19-458	5	3
		639	19-459	10/29/2010	N	N	N		-	-	N/A	N/A
		639	19-460	10/29/2010	N	N	N		-	-	N/A	N/A
		639	19-461	10/29/2010	N	N	Y		-	-	N/A	N/A
		639	19-462	10/29/2010	N	N	N		-	-	N/A	N/A
		639	19-463	10/29/2010	N	N	N		-	-	N/A	N/A
		639	19-464	10/29/2010	Y	N	Y		-	DCD_19-464	5	3
		639	19-465	10/29/2010	N	N	N		-	-	N/A	N/A
		640	19-466	10/29/2010	N	N	N		-	-	N/A	N/A
		640	19-467	10/29/2010	Y	N	N		-	DCD_19-467	5	3
		640	19-468	10/29/2010	N	N	N		-	-	N/A	N/A
		640	19-469	10/29/2010	Y	N	N		-	DCD_19-469	5	3
		640	19-470	10/29/2010	Y	N	N		-	DCD_19-470	5	3

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		640	19-471	10/29/2010	N	N	Y		-	-	N/A	N/A
		640	19-472	10/29/2010	Y	N	Y		-	DCD_19-472	-	3
		641	19-473	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-474	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-475	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-476	10/29/2010	Y	N	Y		-	DCD_19-476	-	3
		641	19-477	10/29/2010	N	N	Y		-	-	N/A	N/A
		641	19-478	10/29/2010	Y	N	N		-	DCD_19-478	5	3
		641	19-479	10/29/2010	Y	N	Y		-	DCD_19-479	-	3
		641	19-480	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-481	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-482	10/29/2010	N	N	N		-	-	N/A	N/A
		641	19-483	10/29/2010	Y	N	Y		-	DCD_19-483	-	3
		649	19-484	2010/11/12	N	N	N		-	-	N/A	N/A
		649	19-485	2010/11/12	Y	N	Y		-	DCD_19-485	6	3
		649	19-486	2010/11/12	N	N	Y		-	-	N/A	N/A
		649	19-487	2010/11/12	N	N	Y		-	-	N/A	N/A
		649	19-488	2010/11/12	Y	N	N		-	DCD_19-488	-	3
		649	19-489	2010/11/12	Y	N	Y		-	DCD_19-489	6	3
		649	19-490	2010/11/12	Y	N	N		-	DCD_19-490	6	3
		649	19-491	2010/11/12	Y	N	Y		-	DCD_19-491	6	3
		669	19-492	2010/12/27	Y	N	N		-	DCD_19-492	1	4
		669	19-493	2010/12/27	Y	N	Y		-	DCD_19-493	1	4
		669	19-493	2011/7/20	Y	N	Y		-	DCD_19-493	1	4
		669	19-494	2010/12/27	N	N	N		-	-	N/A	N/A

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		669	19-494	2012/2/8	Y	Y	Y		-	DCD_19-494	2	4
		669	19-494	6/13/2013	Y	Y	-		-	DCD_19-494	5	4
		669	19-494	12/12/2013	Y	Y	-		-	DCD_19-494 S03	0	
		681	19-495	2011/2/17	Y	N	N		-	DCD_19-495	0	4
		681	19-496	2011/2/17	Y	N	N		-	DCD_19-496	0	4
		681	19-497	2011/2/17	Y	N	N		-	DCD_19-497	-	3
		681	19-498	2011/2/17	Y	N	N		-	DCD_19-498	-	3
		707	19-499	2011/3/29	Y	N	N		-	DCD_19-499	0	4
		707	19-499	3/19/2013	Y	N	N		-	DCD_19-499	4	4
		714	19-500	2011/4/8	Y	N	N		-	DCD_19-500	0	4
		714	19-501	2011/4/8	N	N	N		-	-	N/A	N/A
		744	19-502	2011/5/27	N	N	N		-	-	N/A	N/A
		744	19-502	2011/8/2	N	N	N		-	-	N/A	N/A
		744	19-502	2011/9/8	N	N	N		-	-	N/A	N/A
		744	19-503	2011/5/27	N	N	N		-	-	N/A	N/A
		744	19-503	2011/8/2	Y	N	N		-	DCD_19-503	1	4
		744	19-503	2011/9/8	Y	N	N		-	DCD_19-503	-	4
		744	19-504	2011/5/27	N	N	N		-	-	N/A	N/A
		744	19-504	2011/8/2	N	N	N		-	-	N/A	N/A
		744	19-504	2011/9/8	N	N	N		-	-	N/A	N/A
		744	19-505	2011/5/27	N	N	N		-	-	N/A	N/A
		744	19-505	2011/8/2	N	N	N		-	-	N/A	N/A
		744	19-505	2011/9/8	N	N	N		-	-	N/A	N/A
		749	19-506	2011/5/27	N	N	N		-	-	N/A	N/A
		749	19-506	2011/7/20	Y	N	N		-	DCD_19-506	1	4
		749	19-506	04/25/2012	Y	Y	Y		-	DCD_19-506	3	4
		750	19-507	2011/6/30	N	N	N		-	-	N/A	N/A
		750	19-508	2011/6/30	Y	Y	N		-	DCD_19-508	0	4
		750	19-509	2011/6/30	N	N	N		-	-	N/A	N/A
		750	19-510	2011/6/30	Y	N	N		-	DCD_19-510	0	4
		750	19-511	2011/6/30	Y	N	N		-	DCD_19-511	0	4
		750	19-511	2012/4/26	Y	N	N		-	DCD_19-511 S01	-	4
		750	19-512	2011/6/30	Y	N	N		-	DCD_19-512	0	4
		750	19-513	2011/6/30	Y	N	N		-	DCD_19-513	0	4
		750	19-513	12/12/2013	Y	Y	Y		-	DCD_19-513 S01	0	
		750	19-514	2011/6/30	Y	N	N		-	DCD_19-514	0	4
		750	19-514	12/12/2013	Y	Y	Y		-	DCD_19-514 S01	0	
		750	19-515	2011/6/30	N	N	N		-	-	N/A	N/A
		750	19-515	11/14/2013	Y	Y	Y		-	-	N/A	N/A
		750	19-516	2011/6/30	Y	N	N		-	DCD_19-516	0	4
		750	19-516	11/25/2013	Y	Y	N		-	DCD_19-516 S1	0	
		750	19-517	2011/6/30	N	N	N		-	-	N/A	N/A
		750	19-518	2011/6/30	Y	Y	N		-	DCD_19-518	0	4
		750	19-519	2011/6/30	Y	N	N		-	DCD_19-519	0	4
		750	19-519	9/27/2012	Y	N	N			DCD_19-519	3	4
		752	19-520	2011/7/12	N	N	N		-	-	N/A	N/A
		752	19-521	2011/7/12	N	N	N		-	-	N/A	N/A
		752	19-522	2011/8/23	Y	N	N			DCD_19-522	N/A	N/A
		752	19-523	2011/6/3	N	N	N		-	-	N/A	N/A
		761	19-524	2011/6/29	Y	N	Y		-	-	N/A	N/A
		761	19-524	12/9/2013	N	N	N		-	-	N/A	N/A
		761	19-525	2011/6/29	Y	Y	N		-	DCD_09-525	0	4
		761	19-526	2011/6/29	Y	Y	N		-	DCD_09-526	0	4
		764	19-527	2011/7/15	N	N	N		-	-	N/A	N/A
		764	19-528	2011/7/15	N	N	N		-	-	N/A	N/A
		764	19-529	2011/9/8	N	N	N		-	-	N/A	N/A
		764	19-529	12/2/2013	Y	N	N		-	DCD_19-529 S1	0	
		764	19-530	2011/9/8	N	N	N		-	-	N/A	N/A
		764	19-531	2011/7/15	N	N	N		-	-	N/A	N/A

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		764	19-531	6/27/2012	N	N	N		-	-	N/A	N/A
		773	19-532	2011/8/23	Y	N	N		-	DCD_19-532	1	4
		773	19-532	2012/3/2	Y	N	N		-	DCD_09-532 S01	2	4
		773	19-533	2011/8/23	Y	N	N		-	DCD_19-533	1	4
		773	19-534	2011/8/23	Y	N	N		-	DCD_19-534	1	4
		773	19-535	2011/8/23	Y	N	N		-	DCD_19-535	1	4
		773	19-535	2012/3/2	Y	N	N		-	DCD_19-535 S01	2	4
		773	19-537	10/31/2013	Y	N	N		-	DCD_19-537	N/A	N/A
		773	19-537	2011/8/23	Y	N	N		-	DCD_19-537	1	4
		773	19-538	2011/8/23	Y	N	N		-	DCD_19-538	1	4
		773	19-538	2012/3/2	Y	N	N			DCD_19-538 S01	2	4
		773	19-538	2012/8/9	Y	N	N		-	DCD_19-538	3	4
		773	19-539	2011/8/23	Y	N	N		-	DCD_19-539	1	4
		773	19-540	2011/8/23	N	N	N		-	-	N/A	N/A
		773	19-541	2011/8/23	Y	N	N		-	DCD_19-541	1	4
		773	19-542	2011/8/23	Y	N	N		-	DCD_19-542	1	4
		773	19-543	2011/8/23	Y	N	N		-	DCD_19-543	1	4
		773	19-543	2012/3/2	Y	N	N		-	DCD_19-543 S01	2	4
		773	19-544	2011/8/23	Y	N	N		-	DCD_19-544	1	4
		773	19-544	2012/3/2	Y	N	N		-	DCD_19-544	2	4
		773	19-545	2011/8/23	Y	N	N		-	DCD_19-545	1	4
		783	19-546	2011/8/24	N	N	N		-	-	N/A	N/A
		783	19-547	2011/8/24	Y	N	N		-	DCD_19-547	1	4
		783	19-548	2011/8/24	N	N	N		-	-	N/A	N/A
		823	19-549	2011/10/5	Y	N	Y		-	-	N/A	N/A
		832	19-550	10/27/2011	Y	N	N		-	DCD_19-550	1	4
		832	19-551	10/27/2011	Y	N	N		-	DCD_19-551	1	4
		834	19-552	11/08/2011	Y	N	N		-	DCD_19-552	1	4
		834	19-553	11/08/2011	Y	N	N		-	DCD_19-553	1	4
		834	19-554	11/08/2011	Y	N	N		-	DCD_19-554	1	4
		834	19-555	11/08/2011	N	N	N		-	-	N/A	N/A
		834	19-556	11/08/2011	Y	N	N		-	DCD_19-556	1	4
		834	19-557	11/08/2011	Y	N	N		-	DCD_19-557	1	4
		834	19-558	11/08/2011	N	N	N		-	-	N/A	N/A
		834	19-559	04/25/2012	N	N	N		-	-	N/A	N/A
		871	19-560	6/27/2012	Y	N	N		-	DCD_19-560	3	4
		871	19-560	4/25/2013	Y	Y	Y		-	DCD_19-560	4	4
		872	19-561	12/20/2011	Y	N	N		-	-	N/A	N/A
		872	19-562	12/20/2011	N	N	N		-	-	N/A	N/A
		890	19-563	2/15/2012	N	N	N		-	-	N/A	N/A
		898	19-564	2/28/2012	Y	Y	Y		-	DCD_19-564	2	4
		898	19-564	7/2/2012	Y	Y	Y		-	DCD_19-564	3	4
		899	19-565	7/3/2012	Y	Y	Y		-	DCD_19-565	3	4
		899	19-566	11/28/2012	Y	Y	Y		-	DCD_19-566	3	4
		899	19-567	7/3/2012	N	N	N	-	-	-	N/A	N/A
		924	19-568	8/23/2012	Y	Y	Y		-	DCD_19-568	3	4
		924	19-568	4/22/2013	Y	Y	N		-	DCD_19-568	4	4
		924	19-569	8/9/2012	Y	N	N		-	DCD_19-569	3	4
		924	19-570	1/29/2013	Y	N	N		-	DCD_19-570	4	4
		954	19-571	9/18/2012	Y	N	N		-	DCD_19-571	3	4
		961	19-572	11/12/2012	Y	N	N		-	DCD_19-572	3	4

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
		967	19-573	11/20/2012	Y	N	N		-	DCD_19-573	3	4
		967	19-574	11/20/2012	Y	Y	Y		-	DCD_19-574	3	4
		967	19-575	11/20/2012	Y	N	N		-	DCD_19-573	3	4
		967	19-575	11/12/2013	Y	N	N		-	DCD_19-575 S01	0	
		970	19-576	11/15/2012	N	N	N		-	-	N/A	N/A
		983	19-577	2/6/2013	Y	Y	Y		-	DCD_19-577	4	4
		983	19-578	2/6/2013	Y	Y	Y		-	DCD_19-578	4	4
		983	19-578	12/9/2013	Y	Y	N		-	DCD_19-578 S01	0	
		983	19-579	2/6/2013	Y	N	N		-	DCD_19-579	4	4
		983	19-580	3/8/2013	Y	Y	Y		-	DCD_19-580	4	4
		984	19-581	2/21/2013	Y	N	N		-	DCD_19-581	4	4
		1011	19-582	4/23/2013	Y	Y	N		-	DCD_19-582	4	4
		1011	19-583	4/23/2013	Y	Y	N		-	DCD_19-583	4	4
		1020	19-584	6/7/2013	N	N	N		-	-	N/A	N/A
		1020	19-584	12/12/2013	Y	Y	N		-	DCD_19-494 S03	0	
		1020	19-585	6/7/2013	N	N	N		-	-	N/A	N/A
		1020	19-586	6/20/2013	Y	Y	N		-	DCD_19-586	5	4
		1021	19-587	6/17/2013	N	N	N		-	-	N/A	N/A
		1021	19-587	8/29/2013	N	N	N		-	-	N/A	N/A
		1022	19-589	6/7/2013	N	N	N		-	-	N/A	N/A
		1022	19-590	6/20/2013	Y	Y	N		-	DCD_19-590	5	4
		1022	19-591	6/7/2013	Y	Y	N		-	DCD_19-591	5	4
		1033	19-592	7/12/2013	Y	Y	N		-	DCD_19-592	0	
		1049	19-593	9/26/2013	Y	Y	N		-	DCD_19-593	0	
		1061	19-594	12/12/2013	Y	Y	N		-	DCD_19-594	0	
		1061	19-595	12/12/2013	Y	Y	N		-	DCD_19-595	0	
		1061	19-596	12/12/2013	N	N	N		-	-	N/A	N/A

Chapter:19

SRP Section		DCD RAI Response							Other Drivers	Change ID Number for DCD forthcoming Revision	DCD Tracking Report Revision	DCD Revision
No.	Title	RAI No.	Question No.	Response Date	Impact on DCD	Impact on COLA	Impact on PRA	Response Status				
19.1	Determining the Technical Adequacy	151	19-288	2009/4/10	N	N	N		-	-	N/A	N/A
	of Probabilistic Risk Assessment	151	19-289	2009/4/9	N	N	N		-	-	N/A	N/A
	Results for Risk-Informed Activities	577	19.01-1	2010/5/26	Y	N	N		-	DCD_19.01-1	4	3
		621	19.01-2	2010/9/29	Y	N	N		-	DCD_19.01-2	5	3
		621	19.01-3	2010/9/29	Y	N	N		-	DCD_19.01-3	5	3
		621	19.01-4	2010/9/29	Y	N	N		-	DCD_19.01-4	5	3
		621	19.01-5	2010/9/29	Y	N	N		-	DCD_19.01-5	5	3
		621	19.01-5	2011/7/20	Y	N	N		-	DCD_19-506	1	4
		621	19.01-6	2010/9/29	Y	N	Y		-	DCD_19.01-6	5	3
		621	19.01-7	2010/9/29	Y	N	Y		-	DCD_19.01-7	5	3
		-	-	-	-	-	-	-	COL 19.3(5) deleted	MAP-19-001	-	2
		628	19.01-8	2010/10/14	Y	N	N		-	DCD_19.01-8	5	3
		668	19.01-9	2010/12/27	N	N	N		-	-	N/A	N/A
		668	19.01-10	2010/12/27	Y	N	N		-	DCD_19.01-10	1	
		668	19.01-10	02/07/2012	Y	Y	Y		-	DCD_19.01-10 S01	2	4
		668	19.01-10	04/19/2012	Y	Y	Y		-	DCD_19.01-10	3	4
		668	19.01-11	2010/12/27	Y	N	N		-	DCD_19.01-10	-	3
19.2	Review of Risk Information	2	01-1	2008/5/16	N	N	N	fin.	-	-	N/A	N/A
	Used to Support Permanent Plant -											
	Specific Changes											
	to the Licensing Basis:											
	General Guidance											

US-APWR DCD (Revision 4)

Tracking Report Revision 0

(Non-Security Related Version)

Tier 1

Tier 1 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.11-62	1.3	1-7	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	A symbol of backdraft damper was added.	-
DCD_03.11-62	2.4.2.1	2.4-13, 2.4-14	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.4.2-2 (Sheets 1 through 3 of 3)	2.4-16 through 2.4-18	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.4.2-5 (Sheets 4, 12 of 12)	2.4-24, 2.4-32	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				added.	
DCD_03.11-62	2.4.4.1	2.4-39, 2.4-40	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.4.4-2 (Sheets 1 through 4 of 4)	2.4-43 through 2.4-46	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of SIPs and several valves were revised.	-
DCD_03.11-62	Table 2.4.4-5 (Sheets 4, 14 of 14)	2.4-53, 2.4-63	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.4.5.1	2.4-70, 2.4-71	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				Design description on dynamic restraints was added.	
DCD_03.11-62	Table 2.4.5-2 (Sheets 1 through 3 of 3)	2.4-73 through 2.4-75	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves and instruments was revised.	-
DCD_03.11-62	Table 2.4.5-5 (Sheets 5, 13 of 13)	2.4-82, 2.4-90	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.4.6.1	2.4-94, 2.4-95	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.4.6-2 (Sheets 1 through 6 of 6)	2.4-98 through 2.4-103	Response to Amended RAI No. 1031 MHI Letter No.	Note on qualification of harsh environment of non-metallic parts was	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			UAP-HF-13176 Date 8/2/2013	added. Qualification for harsh environment of several valves and temperature elements was revised. CVS-VLV-592 and 594 were deleted from the table.	
DCD_03.11-62	Table 2.4.6-5 (Sheets 4, 8 of 8)	2.4-109, 2.4-113	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_08.02-17 S01	Table 2.6.1-3 (Sheet 2 of 8)	2.6-7	Response to RAI No. 1017 amended S01 MHI Letter No. UAP-HF-13312 Date 12/18/2013	Design description was added to address the NRC Bulletin 2012-01.	-
DCD_03.11-62	2.6.4.2	2.6-36	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.6.4-1 (Sheet 10 of	2.6-46	Response to Amended RAI	ITAAC of dynamic restraints were added.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	10)		No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013		
DCD_03.11-62	2.7.1.2.1	2.7-6, 2.7-7	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.7.1.2-2 (Sheets 1, 2 of 2)	2.7-9, 2.7-10	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.7.1.2-5 (Sheets 5, 12 of 12)	2.7-17, 2.7-24	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.7.1.9.1	2.7-33	Response to Amended RAI	"Class 1E" was deleted and "including non-	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	
DCD_03.11-62	Table 2.7.1.9-2 (Sheets 1, 2 of 2)	2.7-35, 2.7-36	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.7.1.9-5 (Sheets 5, 8 of 8)	2.7-42, 2.7-45	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.7.1.10.1	2.7-48	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.11-62	Table 2.7.1.10-4 (Sheets 6, 8 of 8)	2.7-56, 2.7-58	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.7.1.11.1	2.7-61, 2.7-62	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.7.1.11-2 (Sheets 1 through 11 of 11)	2.7-66 through 2.7-76	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of EFWPs, several valves and several instruments was revised.	-
DCD_03.11-62	Table 2.7.1.11-5 (Sheets 5, 10 of 10)	2.7-83, 2.7-88	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			8/2/2013	ITAAC. ITAAC of dynamic restraints were added.	
DCD_03.11-62	2.7.3.3.1	2.7-113, 2.7-114	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing design description. Design description on dynamic restraints was added.	-
DCD_03.11-62	Table 2.7.3.3-2 (Sheets 1 through 10 of 10)	2.7-117 through 2.7-126	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.7.3.3-5 (Sheets 5, 10 of 10)	2.7-136, 2.7-141	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.7.3.5.1	2.7-147	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-	Design description on dynamic restraints was added.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13176 Date 8/2/2013		
DCD_03.11-62	Table 2.7.3.5-2 (Sheets 1 through 3 of 3)	2.7-149 through 2.7-151	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.7.3.5-5 (Sheets 6, 9 of 9)	2.7-160, 2.7-163	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	ITAAC of dynamic restraints were added.	-
DCD_09.04.01-32 S02	Table 2.7.5.1-2 (Sheet 2 of 2)	2.7-186	Supplemental Response to RAI No. 883 MHI Letter No. UAP-HF-13194 Date 07/19/2013	Main control room air handling unit water level's MCR display and RSC display were changed from "No" to "Yes".	-
DCD_03.11-62	2.7.5.2.2	2.7-197	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Backdraft dampers were added to an existing design description of the SSCs with active safety function.	-
DCD_03.11-62	Table 2.7.5.2-1 (Sheets 1	2.7-198 through	Response to Amended RAI	Note on qualification of harsh environment of non-	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	through 10 of 10)	2.7-207	No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	metallic parts was added. Qualification for harsh environment of several filtration units, dampers, air-handling units, cooling coils, heating coils, duct work and instruments was revised.	
DCD_03.11-62	Table 2.7.5.2-3 (Sheet 8 of 11)	2.7-218	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Backdraft dampers were added to the existing ITAAC.	-
DCD_03.11-62	Figure 2.7.5.2-1	2.7-222	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Backdraft dampers were added to the figure.	-
DCD_03.11-62	Figure 2.7.5.2-3	2.7-224	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Backdraft dampers were added to the figure.	-
DCD_03.11-62	2.7.6.3.1	2.7-245	Response to Amended RAI	Design description of SSCs on qualification for a	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	harsh environment and of dynamic restraints was added.	
DCD_03.11-62	Table 2.7.6.3-1 (Sheets 1, 2 of 2)	2.7-246, 2.7-247	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.7.6.3-5 (Sheet 6 of 6)	2.7-255	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	ITAAC of SSCs on environmental qualification was added. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.7.6.7.1	2.7-278	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to the existing design description. Design description of dynamic restraints was added.	-
DCD_03.11-62	Table 2.7.6.7-1	2.7-279	Response to Amended RAI No. 1031	Note on qualification of harsh environment of non-metallic parts was	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			MHI Letter No. UAP-HF-13176 Date 8/2/2013	added. Qualification for harsh environment of heat exchanges and several valves was revised.	
DCD_03.11-62	Table 2.7.6.7-5 (Sheets 4, 7 of 7)	2.7-285, 2.7-288	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	-
DCD_03.11-62	2.11.2.1	2.11-6, 2.11-7	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to the existing design description. Design description of dynamic restraints was added.	-
DCD_03.11-62	Table 2.11.2-1 (Sheets 1 through 11 of 11)	2.11-8 through 2.11-18	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves was revised.	-
DCD_03.11-62	Table 2.11.2-1 (Sheets 4, 11	2.11-22,	Response to Amended RAI	"Class 1E" was deleted and	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	of 11)	2.11-29	No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic restraints were added.	
DCD_03.11-62	2.11.3.1	2.11-34, 2.11-35	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to the existing design description. Design description of dynamic restraints was added.	-
DCD_03.11-62	Table 2.11.3-2	2.11-37	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Note on qualification of harsh environment of non-metallic parts was added. Qualification for harsh environment of several valves and instruments was revised.	-
DCD_03.11-62	Table 2.11.3-5 (Sheets 5, 10 of 10)	2.11-43, 2.11-48	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to existing ITAAC. ITAAC of dynamic	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				restraints were added.	
MIC-04-T1-00006	2.9.1 2.9.1.1 2.9.1.2	2.9-1	Response to RAI No. 838 amended MHI Letter No. UAP-HF-14002 Date 01/21/2014	Editorial Changes	-
DCD_14.03.09-9 S01	2.9.1.1 2.9.1.2 Table 2.9-1 (Sheets 1 through 2)	2.9-1 2.9-1 through 2.9-3 2.9-4 2.9-5	Response to RAI No. 838 amended MHI Letter No. UAP-HF-14002 Date 01/21/2014	Revision of HFE ITAAC description and table	-
DCD_07.09-27	2.5.6.1 Table 2.5.6-1 (Sheet 2 of 2)	2.5-57 2.5-60	Response to RAI No. 1076 MHI Letter No. UAP-HF-14016 Date 2/25/2014	Revised Subsection 2.5.6.1 and Table 2.5.6-1.	-
MIC-04-T1-00003	1.1	1-1	Instruction by NC on 7/18/2013	Supplemental description was added to the definition of "ASME".	0
DCD_03.07.03-12	Table 2.1-1	2.1-8	Response to RAI No. 950 MHI Letter No. UAP-HF-13249 Date 10/16/2013	Site parameters of soil were added for clarification based upon subjected RAI.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-T1-00005	Table 2.2-2 (Sheet 10 of 17) Table 2.2-4 (Sheet 4 of 6)	2.2-16 2.2-28	Editorial correction	Format of the header was adjusted. A space was added.	0
MIC-04-T1-00008	Table 2.3-2 (Sheet 3 of 3) Table 2.4.2-5 (Sheet 9 of 12) 2.4.4.1 Table 2.4.4-5 (Sheet 1 of 12)	2.3-9 [2.3-8] 2.4-29 2.4-39 2.4-50	Consistency of the referenced analysis report name. Correct an editorial spacing issue. Added another exception to list in Item 1b. Added another exception to ITAAC 1.b	Revised ITAAC 5 DC, ITA, and AC so all three consistently use the phrase “pipe break hazard analysis report(s)”. Revised ITAAC 14.ii ITA to add missing space between the words “be” and “prepared”. Revised exclusion list to include new item “accumulator nitrogen vent piping”. Revised ITAAC 1.b DC and ITA to include an additional exception for the “accumulator nitrogen vent piping”.	0
MIC-04-T1-	Table 2.3-2 (Sheets 1,3 of	2.3-6	Editorial	An unnecessary space was deleted.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
00005	3)	2.3-8	correction	A period was added. An unnecessary vacant line was deleted.	
MIC-04-T1-00005	Table 2.4.1-2 (Sheets 3 through 5 of 5) Table 2.4.2-5 (Sheets 9 through 11 of 12) Table 2.4.4-5 (Sheets 7[6], 10[8], 12[10] through 14[12] of 14[12]) Table 2.4.5-5 (Sheet 8 through 13[11]	2.4-6 through 2.4-8 2.4-29 through 2.4-31 2.4-56 [2.4-55], 2.4-59 [2.4-57], 2.4-61 [2.4-59] through 2.4-63 [2.4-61] 2.4-85 [2.4-84] through	Editorial correction	Format of the header was adjusted. A redundant comma was deleted. "And" between "058A" and "RCS-PT-061" was deleted. A comma was replaced with a period. A semicolon or a period was deleted. A period was added. A comma was replaced with a period. ITA and AC were re-indented. A space was deleted. AC was re-indented. A period was added. Format of a header format was	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	of 13[11]) Table 2.4.6-5 (Sheet 5,6 of 8)	2.4-90 [2.4-87] 2.4-110 [2.4-107], 2.4-111 [2.4-108]		adjusted. A comma was replaced with a period. A period was added. DC, ITA and AC were re-indented. A period was added. DC was re-aligned.	
DCD_03.11-62 S01	Table 2.4.2-2 (Sheet 3 of 3) Table 2.4.4-2 (Sheet 4 of 4) Table 2.4.5-2 (Sheet 3 of 3) Table 2.4.6-2 (Sheet 6 of 6) Table 2.7.1.2-2 (Sheet 2 of 2) Table 2.7.1.9-2 (Sheet 2 of 2)	2.4-18 2.4-46 2.4-75 [2.5-73] 2.4-103 [2.4-99] 2.7-10 2.7-36 [2.7-35]	Response to RAI No. 1031 S01 MHI Letter No. UAP-HF-13308 Date 12/18/2013	Revised notes of Tables 2.4.2-2, 2.4.4-2, 2.4.5-2, 2.4.6-2, 2.7.1.2-2, 2.7.1.9-2, 2.7.1.11-2, 2.7.3.3-2, 2.7.3.5-2, 2.7.5.2-1, 2.7.6.3-1, 2.7.6.7-1, 2.11.2-1, and 2.11.3-2.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	Table 2.7.1.11-2 (Sheet 11[10] of 11[10]) Table 2.7.3.3-2 (Sheet 10[9] of 10[9]) Table 2.7.3.5-2 (Sheet 3 od 3) Table 2.7.5.2-1 (Sheet 10 of 10) Table 2.7.6.3-1 (Sheet 2 of 2) Table 2.7.6.7-1 Table 2.11.2-1 (Sheet 11[10] of 11[10]) Table 2.11.3-2	2.7-76 [2.7-71] 2.7-126 [2.7-118] 2.7-151 [2.7-145] 2.7-207 [2.7-200] 2.7-247 [2.7-238] 2.7-279 [2.7-272] 2.11-18 2.11-37 [2.11-39, 2.11-40]			
MIC-04-T1-00004	Table 2.4.4-6 [Sheets 1 and	2.4-64 [2.4-62,	Incorporation of revision in MUAP-07001	Description of terminology was adjusted to the	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	2 of 2]	2.4-63]	Revision 5	MUAP. Formula for uncertainties of Characteristic Equations was revised..	
DCD_07.05-18 S02	Table 2.4.6-2 (sheet 6 of 6) Table 2.4.6-4 Table 2.5.4-1 Table 2.5.4-3	2.4-103 [2.4-99] 2.4-105 [2.4-101] 2.5-50 [2.5-48] 2.5-52 [2.5-50]	Response to RAI No. 568 amended 02 MHI Letter No. UAP-HF-13223 Date 09/11/2013	Revised Table 2.4.6-2 (Sheet 6 of 6), Table 2.4.6-4, Table 2.5.4-1, and Table 2.5.4-3.	0
MIC-04-T1-00005	Table 2.5.1-6 (Sheet 8, 12[11] of 15[14]) Table 2.5.3-4 (Sheet 3[2] of 5[4])	2.5-19, 2.5-23 [2.5-22] 2.5-45 [2.5-43]	Editorial correction	DC, ITA and AC were re-indented. Font size was corrected. A space was added. A period was added.	0
MIC-04-T1-00002	Table 2.5.3-4 (Sheet 3 of 4)	2.5-46 [2.5-44]	Typo	Changed from “DACC” to “DAAC” in Inspections, Tests, Analyses 1.e.i i”.	0
DCD_07.09-26 S01	2.5.6.1 Table 2.5.6-1 (Sheet 2 of 2)	2.5-57 [2.5-55] 2.5-60 [2.5-58]	Response to RAI No. 992 amended S01 MHI Letter No. UAP-HF-13235 Date 11/1/2013	Revised Subsection 2.5.6.1 and Table 2.5.6-1 (Sheet 2 of 2).	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-T1-00001	2.5.6.1 Table 2.5.6-1 (Sheet 1 of 2)	2.5-57 [2.5-55] 2.5-59 [2.5-57]	Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	Revised subsection 2.5.6.1 and Table 2.5.6-1 (Sheet 1 of 2).	0
MIC-04-T1-00005	2.6.1.1 Table 2.6.1-2 Table 2.6.1-3 (Sheet 1, 3 of 8) 2.6.2.1 Table 2.6.2-2 (Sheets 2,3 of 5) Table 2.6.3-3 (Sheet 3 of 4) Table 2.6.4-1 (Sheet 6[5], 9 of 10) Table 2.6.5-1	2.6-2 2.6-5 2.6-6 2.6-8 2.6-16 2.6-19 2.6-20 2.6-30 2.6-42 [2.6-41], 2.6-45 2.6-51	Editorial correction	A period was added. Color of font was corrected. “As-built” was deleted. A period was added. A period was added. “As-built” was deleted. A period was added. A period was added. A period was added. A period was added.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	(Sheet 2 of 3)				
MIC-04-T1-00007	2.6.5.1	2.6-49	Typo	Inserted a new line.	0
MIC-04-T1-00005	2.7.1.2.1 Table 2.7.1.2-4 Table 2.7.1.2-5 (Sheets 8[6], 9[7], 11[8], 12[9] of 12[10]) Table 2.7.1.9-5 (Sheets 1, 7[6] of 8[7]) Table 2.7.1.11-4 Table 2.7.1.11-5 (Sheets 1, 7[6], 9[8] of 10[9]) Table 2.7.3.3-1 (Sheet 1 of	2.7-6 2.7-12 2.7-20 [2.7-18], 2.7-21 [2.7-19], 2.7-23 [2.7-20], 2.7-24 [2.7-21] 2.7-38 [2.7-37], 2.7-44 [2.7-42] 2.7-78 [2.7-73] 2.7-79 [2.7-74], 2.7-85 [2.7-79], 2.7-87 [2.7-81] 2.7-115 [2.7-	Editorial correction	A period was added. Format of header was adjusted. A period was added. A comma was replaced with a period. A space was added. A redundant period was deleted. A redundant period was deleted. A period was added. Format of header was adjusted. DC, ITA and AC were re-indented. A period was added. An unnecessary space was deleted. An unnecessary space was deleted.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	2)	108]		A semicolon was replaced with a colon.	
	Table 2.7.3.3-2 (Sheet 1 of 10[9])	2.7-117 [2.7-110]		Format of header was adjusted.	
	Table 2.7.3.3-3 (Sheet 1 of 2)	2.7-127 [2.7-119]		A semicolon was replaced with a colon.	
	Table 2.7.3.5-1	2.7-148 [2.7-142]		A comma was deleted.	
	Table 2.7.3.5-5 (Sheet 8 of 9)	2.7-162 [2.7-155]		A comma was deleted. A period was deleted.	
	Table 2.7.5.1-3 (Sheet 1 of 6)	2.7-187 [2.7-180]		A redundant comma was deleted.	
	Table 2.7.5.2-1 (Sheet 4 of 10)	2.7-201 [2.7-194]		Format of header was adjusted.	
	Table 2.7.5.2-2 (Sheets 1 through 3 of 3)	2.7-208 [2.7-201] through 2.7-210 [2.7-203]		Format of header was adjusted.	
	Table 2.7.5.2-3 (Sheet 7[6], 9[7], 10[8] of 11[9])	2.7-217 [2.7-209, 2.7-210],		ITA and AC were re-indented.	

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
		2.7-219 [2.7-211]			
	Table 2.7.5.4-2	2.7-234 [2.7-225]		Format of header was adjusted.	
	Table 2.7.6.3-1 (Sheets 1,2 of 2)	2.7-246 [2.7-237], 2.7-247 [2.7-238]		Format of header was adjusted.	
	Table 2.7.6.3-3	2.7-248 [2.7-239]		Format of header was adjusted.	
	Table 2.7.6.3-4	2.7-249 [2.7-240]		Title of the table was re-shaped.	
	2.7.6.4.1	2.7-258 [2.7-250]		A comma was added.	
	Table 2.7.6.4-2 (Sheets 2,3 of 4)	2.7-262 [2.7-254], 2.7-263 [2.7-255]		A comma was added. A period was added. Font size was adjusted.	
	Table 2.7.6.5-1 (Sheets 2,3 of 4[5])	2.7-268 [2.7-260], 2.7-269 [2.7-261]		A period was added.	
	Table 2.7.6.6-	2.7-273 [2.7-		Format of header was adjusted.	

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	1 (Sheets 1,2 of 2)	266], 2.7-274 [2.7-267]			
	Table 2.7.6.7-5 (Sheet 3 of 7[8])	2.7-284 [2.7-277]		An unnecessary space was deleted.	
	Table 2.7.6.8-1 (Sheet 1,2 of 3[2])	2.7-291 [2.7-285], 2.7-292 [2.7-286]		Format of header was adjusted.	
	2.7.6.9.1	2.7-295 [2.7-288]		A period was added.	
	Table 2.7.6.9-2 (Sheets 1,2[1] of 2)	2.7-297 [2.7-290]		A period was added.	
	Table 2.7.6.13-1 Table 2.7.6.13-2	2.7-306 [2.7-299]		Format of header was adjusted.	
MIC-04-T1-00005	Table 2.11.1-2 (Sheet 1 of 2)	2.11-3	Editorial correction	An unnecessary vacant line was deleted.	0
	Table 2.11.2-2 (Sheets 2, 7[8], 10[11], 11[12] of 11[13])	2.11-20, 2.11-25 [2.11-26], 2.11-28 [2.11-29],		Format of header was adjusted. A period was added.	

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	Table 2.11.3-5 (Sheet 7[6] of 10[8])	2.11-29 [2.11-30] 2.11-45 [2.11-47]		A period was added.	
MIC-04-T1-00005	Table 2.12-1 (Sheets 1 through 4 of 4)	2.12-4 through 2.12-7	Editorial correction	DC, ITA and AC were re-indented. A period was added.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

1.0 INTRODUCTION

1.1 DEFINITIONS

The following definitions apply to terms that may be used in the Design Descriptions and associated Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC).

Acceptance Criteria means the performance, physical condition, or analysis result for a structure, system, or component that demonstrates that the Design Commitment is met.

Analysis means a calculation, mathematical computation, or engineering/ technical evaluation. Engineering or technical evaluations could include, but are not limited to, comparisons with operating experience or design of similar SSCs.

As-built means the physical properties of a structure, system, or component following completion of its installation or construction activities at its final location at the plant site. In cases where it is technically justifiable, determination of physical properties of the as-built structure, system, or component may be based on measurements, inspections, or tests that occur prior to installation, provided that subsequent fabrication, handling, installation, and testing do not alter the properties.

ASME Code means Section III of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. Some Tier 1 ITAAC design commitments in the US-APWR DCD specify that structures, systems, or components be designed and constructed in accordance with ASME Code Section III requirements. When this language is used, it indicates that the ITAAC for that design commitment will be met by satisfying the edition and addenda of the ASME Boiler and Pressure Vessel Code, Section III as specified in the FSAR and incorporated by reference in 10 CFR 50.55a subject to the conditions listed in 10 CFR 50.55a(b), or in accordance with alternatives to paragraphs (b), (c), (d) or (e) of 10 CFR 50.55a as authorized by the NRC pursuant to 10 CFR 50.55a(a)(3). MIC-04-T1-00003

Note: This definition applies to ASME Code for construction (including design) and not ASME Code for inservice testing.

ASME Code Report means a report required by the ASME Code and whose content requirements are stipulated by the ASME Code. Each such ASME Code Report is final, and, when required, is certified in accordance with the Code.

Channel means an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. A channel loses its identity where single protective action signals are combined.

Column line is the designation applied to a plant reference grid used to define the locations of building walls and columns. Column lines may not represent the centerline of walls and columns.

Containment, when this term is used as "the containment," means the containment vessel or, as it is sometimes referred to, the prestressed concrete containment vessel.

Design Commitment means that portion of the Design Description that is verified by ITAAC.

Design Description means that portion of the design that is certified.

Table 2.1-1 Key Site Parameters
(Sheet 7 of 8)

Hydrologic Engineering		
Parameter Description	**Parameter Value**	
Maximum flood (or tsunami) level	1 ft below plant grade	
Maximum rainfall rate (hourly)	19.4 in/hr for seismic category I/II structures	
Maximum rainfall rate (short-term)	6.3 in/5 min for seismic category I/II structures	
Maximum groundwater level	1 ft. below plant grade	
Geology, Seismology, and Geotechnical Engineering		
Parameter Description	**Parameter Value**	
Maximum slope for foundation-bearing stratum	20˚ from horizontal in untruncated strata	
Safe-shutdown earthquake (SSE) ground motion	0.3 g peak ground acceleration	
SSE (certified seismic design) horizontal ground response spectra	Regulatory Guide (RG) 1.60, enhanced spectra in high frequency range (See Figure 2.1-1)	
SSE (certified seismic design) vertical ground response spectra	RG 1.60, enhanced spectra in high frequency range (See Figure 2.1-2)	
Potential for surface tectonic deformation at site	None within the EAB	
Subsurface stability – minimum allowable static bearing capacity	15,000 lb/ft^2	
Subsurface stability – minimum allowable dynamic bearing capacity, normal conditions plus SSE	35,000 lb/ft^2	
Minimum factors of safety for bearing capacity without justification [(16)]	FS = 2.5 - for static bearing capacity	
	FS = 2.0 - for dynamic bearing capacity	
Subsurface stability – minimum shear wave velocity at SSE input at ground surface	1,000 ft/s	
Subsurface stability – liquefaction potential	None (for seismic category I structures)	
Minimum angle of internal friction for engineered fill ~~and~~or natural in-situ granular soil subgrades beneath the basemat	35˚	DCD_03.07.03-12
Presence of fine-grained materials, i.e., silts and clays classified as ML, CL, MH, CH in the Unified Soil Classification System, within 6 in. of bottom of R/B Complex and T/B basemat	Not Permitted	
Maximum moist unit weight for engineered fill or natural in-situ granular soil at the sides of the foundation	125 pounds per cubic foot	DCD_03.07.03-12
Maximum angle of internal friction for engineered fill or natural in-situ granular soil at the sides of the foundation	35˚	
Total settlement of R/B complex foundation during construction and operational life[(14)(15)]	9.0 in.	

Table 2.2-2 Definition of Wall Thicknesses for Seismic Category I Structures: Containment Internal Structure, Reactor Building, and Power Source Building (Sheet 10 of 17)

MIC-04-T1-00005

Wall or Section Description	Column Lines(1)	Floor Elevation or Elevation Range(1)	Concrete Thickness(3)(5)	Applicable Radiation Shielding Wall (Yes/No)
Column Line 17R wall	From CR to DR	From 25'-3" to 50'-2"	2'-8"	No
Column Line 17R wall	From DR to ER	From 25'-3" to 50'-2"	3'-10"	Yes
Column Line 17R wall	From ER to GR	From 25'-3" to 50'-2"	2'-8"	Yes
Column Line 17R wall	From GR to HR	From 25'-3" to 50'-2"	3'-10"	Yes
Column Line 17R wall	From HR to H1R	From 25'-3" to 50'-2"	2'-8"	No
Column Line 17R wall	From CR to H1R	From 50'-2" to 76'-5"	2'-8"	Yes
Column Line 17R wall	From D1R to ER	From 76'-5" to 112'-0"	2'-8"	No
Column Line 17R wall	From ER to GR	From 76'-5" to 101'-0"	2'-8"	Yes
Column Line 17R wall	From GR to H1R	From 76'-5" to 101'-0"	3'-8"	Yes
Column Line 18R wall	From CR to JR	From -26'-4" to 3'-7"	3'-4"	Yes
Column Line 18R wall	From CR to 17'-0" south of D1R	From 3'-7" to 25'-3"	3'-4"	Yes
Column Line 18R wall	From 17'-0" south of D1R to 10'-8" south of GR	From 3'-7" to 17'-8"	3'-4"	Yes
Column Line 18R wall	From 17'-0" south of D1R to 10'-8" south of GR	From 17'-8" to 25'-3"	4'-2"	Yes
Column Line 18R wall	From 10'-8" south of GR to JR	From 3'-7" to 25'-3"	3'-4"	Yes
(Deleted)				

Table 2.2-4 Structural and Systems Engineering Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 4 of 6)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
21. Safety-related SSCs are protected from any credible internal missile sources inside and outside the containment.	21. Inspections and analyses will be performed to verify that as-built safety-related SSCs are protected from credible internal missile sources by the methods described in Section 2.2.2.1.	21. A report exists and concludes that as-built safety-related SSCs are protected from credible internal missile sources by the methods described in Section 2.2.2.1.
22. Deleted.	22. Deleted.	22. Deleted.
23.a The seismic Category II structures identified in Table 2.2-1 will not impair the ability of seismic Category I SSC to perform its design basis safety function during or following an SSE.	23.a Analyses and inspections will be performed to verify that the as-built configuration of seismic Category II structures identified in Table 2.2-1 will not impair the ability of seismic Category I SSC to perform its desgn basis safety function during or following an SSE.	23.a A report exists and concludes that the as-built seismic Category II structures identified in Table 2.2-1 will not impair the ability of seismic Category I SSC to perform its design basis safety function during or following an SSE.
23.b Seismic Category II systems and components will not impair the ability of seismic Category I SSC to perform its design basis safety function during or following an SSE.	23.b Analyses and inspections will be performed to verify that the as-built configuration of seismic Category II systems and components will not impair the ability of a seismic Category I SSC to perform its design basis safety function during or following an SSE.	23.b A report exists and concludes that as-built seismic Category II systems and components will not impair the ability of a seismic Category I SSC to perform its design basis safety function during or following an SSE.
24. SSCs that require evaluation in the seismic fragilities task of a seismic margin analysis have high confidence of low probability of failure (HCLPF) values equal to or greater than the review level earthquake.	24.i Analyses will be performed to verify that the SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment have HCLPF values equal to or greater than the review level earthquake.	24.i Reports exist and conclude that the SSCs evaluated in the seismic fragilities task of the seismic margin assessment have HCLPF values equal to or greater than the review level earthquake.
	24.ii Inspection and analysis will be performed to verify that as-built SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment are bounded by conditions used in the assessment.	24.ii A report exists and concludes that the as-built SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment are bounded by the conditions used in the assessment.

MIC-04-T1-0 0005

Table 2.3-2 Piping Systems and Components Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 3)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The ASME Code Section III, Class 1 piping systems and components (PSC), for systems identified in Table 2.3-3, are designed to retain their pressure integrity and functional capability under internal design and operating pressures and design basis loads.	1.a .i An inspection of the stress report(s) for the ASME Code, Section III, Class 1 PSC, for systems identified in Table 2.3-3, will be performed.	1.a.i The stress report(s) exist and conclude that the design of the ASME Code Section III Class 1 PSC, for systems identified in Table 2.3-3, comply with the requirements of the ASME Code Section III.
	1.a-.ii Deleted.	1.a.ii Deleted.
1.b The usage factors for ASME Code Section III Class 1 PSC , for systems identified in Table 2.3-3, are evaluated for both air and reactor coolant environments.	1.b .i An analysis of the ASME Code, Section III, Class 1 PSC, for systems identified in Table 2.3-3, will be performed.	1.b.i Report(s) exist and conclude that the usage factors for ASME Code Section III Class 1 PSC, for systems identified in Table 2.3-3, are evaluated for air and reactor coolant environments.
	1.b .ii Deleted.	1.b.ii Deleted.

MIC-04-T1-0 0005

Table 2.3-2 Piping Systems and Components Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 3)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4. Safety-related SSCs are designed to be protected against or are qualified to withstand the dynamic and environmental effects associated with analyses of postulated failures in high-energy piping and moderate-energy piping systems identified in Table 2.3-1 so that the reactor can be shut down safely and maintained in a safe, cold shutdown condition without offsite power.	4.i Dynamic effects analysis will be performed for the high-energy piping systems identified in Table 2.3-1. The analysis includes the evaluation of pipe whip and jet impingement.	4.i The as-designed pipe break hazard analysis report(s) exist and conclude that for each postulated piping failure for the high-energy piping systems identified in Table 2.3-1: (A) piping stresses in the containment penetration area are within allowable stress limits, (B) pipe whip restraints and jet shield designs can mitigate pipe break loads, and (C) loads on safety-related SSCs are within design load limits.
	4.ii Environmental effects analysis will be performed for the high-energy piping and moderate-energy piping systems identified in Table 2.3-1. The analysis includes the evaluation for wetting from spray, flooding, room pressurization, and temperature effects, as applicable.	4.ii The as-designed pipe break hazard analysis report(s) exist and conclude that for each postulated piping failure of the high-energy and moderate-energy systems identified in Table 2.3-1, the safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures. MIC-04-T1-00005
5. The high-energy piping systems, including the protective features, and moderate-energy piping systems are reconciled with the pipe break hazard~~s~~ analys~~e~~is report(s) to ensure that the safety-related SSCs are protected against or are qualified to withstand the dynamic and environmental effects associated with postulated failures of these piping systems.	5. Using the as-designed pipe break hazard analysis report(s), inspection and reconciliation analysis of the as-built high-energy piping, including the protective features, and moderate-energy piping systems, and safety-related SSCs will be performed.	5. Pipe break hazard analysis report(s) exist and conclude that the as-built safety-related SSCs are protected against or are qualified to withstand the effects of postulated pipe failures of the as-built high-energy and moderate-energy piping systems. MIC-04-T1-00008 MIC-04-T1-00008

Table 2.4.1-2 Reactor System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 5)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8. The seismic Category I equipment identified in Table 2.4.1-1 can withstand seismic design basis loads without loss of safety function.	8.i Inspections will be performed to verify that the as-built seismic Category I equipment identified in Table 2.4.1-1, excluding fuel assemblies, is located in a seismic Category I structure.	8.i The as-built seismic Category I equipment identified in Table 2.4.1-1, excluding fuel assemblies, is located in a seismic Category I structure.
	8.ii Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment identified in Table 2.4.1-1 will be performed using analytical assumptions, or will be performed under conditions, which bound the seismic design basis requirements.	8.ii A report exists and concludes that the seismic Category I equipment identified in Table 2.4.1-1 can withstand seismic design basis loads without loss of safety function.
	8.iii Inspections and analyses will be performed to verify that the as-built seismic Category I equipment identified in Table 2.4.1-1, including anchorages, excluding fuel assemblies, is seismically bounded by the tested or analyzed conditions.	8.iii A report exists and concludes that the as-built seismic Category I equipment identified in Table 2.4.1-1, including anchorages, excluding fuel assemblies, is seismically bounded by the tested or analyzed conditions.
9. The reactor internals can withstand flow-induced vibration.	9.i A flow-induced vibration type test will be performed to measure the vibration response in the preoperational test on the first US-APWR unit.	9.i A report exists and concludes that the results of the first US-APWR unit flow-induced vibration test show that the alternating stress is acceptably low in comparison with the limit for high cycle fatigue in the ASME code.
	9.ii A pre-test inspection, a flow test, and a post-test inspection will be conducted on the as-built reactor internals.	9.ii No structural damage is observed in post-test inspections.

Table 2.4.1-2 Reactor System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 4 of 5)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
10. The Class 1E equipment identified in Table 2.4.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	10.i Type tests or a combination of type tests and analyses using the design environmental conditions, or under the conditions which bound the design environmental conditions, will be performed on Class 1E equipment identified in Table 2.4.1-1 as being qualified for a harsh environment.	10.i An equipment qualification data summary report exists and concludes that the Class 1E equipment identified in Table 2.4.1-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.
	10.ii Inspection will be performed of the as-built Class 1E equipment identified in Table 2.4.1-1 as being qualified for a harsh environment and the associated wiring, cables, and terminations located in a harsh environment.	10.ii The as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.4.1-1 as being qualified for a harsh environment are bounded by type tests or a combination of type tests and analyses.
11. Class 1E equipment, identified in Table 2.4.1-1, is powered from its respective Class 1E division.	11. A test will be performed on each division of the as-built Class 1E equipment identified in Table 2.4.1-1 by providing a simulated test signal only in the Class 1E division under test.	11. The simulated test signal exists at the as-built Class 1E equipment identified in Table 2.4.1-1 under test.
12. Separation is provided between redundant divisions of reactor system Class 1E cables, and between Class 1E cables and non-Class 1E cables.	12. Inspections of the as-built Class 1E divisional cables will be performed.	12. Physical separation or electrical isolation is provided in accordance with RG 1.75, between the as-built cables of redundant reactor system Class 1E divisions and between Class 1E cables and non-Class 1E cables.

Table 2.4.1-2 Reactor System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 5 of 5)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
13. Displays identified in Table 2.4.1-1 are provided in the MCR.	13. Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.4.1-1, except for the following displays whose retrievability will be performed only on the as-built O-VDU: NIS-NE-035, 036, 041, 042, 043 and 044.	13. Displays identified in Table 2.4.1-1 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR, except for the following displays which can be retrieved only on the as-built O-VDU in the MCR: NIS-NE-035, 036, 041, 042, 043 and 044.
14.i Surveillance capsule guide baskets are attached to the core barrel to hold capsules with material surveillance specimens.	14.i Inspection of the as-built core barrel will be performed for the existence of the surveillance capsule guide baskets.	14.i Four surveillance capsule guide baskets are attached to the as-built core barrel as described in the design basis.
	14.ii Analysis and inspection will be performed to determine the existence and location of the surveillance capsules in the as-built surveillance capsule baskets.	14.ii Six surveillance capsules are provided at the location in the as-built surveillance capsule guide baskets determined by the analysis.

Table 2.4.2-2 Reactor Coolant System Equipment Characteristics (Sheet 3 of 3)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/Qual. for Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Pressurizer Water Level	RCS-LT-061, 062, 063, 064	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Pressure	RCS-PT-020, 030, 040, 050	—	Yes	—	Yes/Yes	—	—	—
Pressurizer Pressure	RCS-PT-061, 062, 063, 064	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Hot Leg Temperature (Wide Range)	RCS-TE-020, 030, 040, 050	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Cold Leg Temperature (Wide Range)	RCS-TE-025, 035, 045, 055	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Hot Leg Temperature (Narrow Range)	RCS-TE-021A, 021B, 021C, 031A, 031B, 031C, 041A, 041B, 041C, 051A, 051B, 051C	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Cold Leg Temperature (Narrow Range)	RCS-TE-021D, 031D, 041D, 051D	—	Yes	—	Yes/Yes	—	—	—
Reactor Coolant Pump Speed	RCS-SE-028A, 038A, 048A, 058A	—	Yes	—	Yes/Yes(1)	—	—	—

DCD_03.11-62

NOTE:

Dash (-) indicates not applicable

1. Qualification for harsh environment is not required for post-accident environmental condition. DCD_03.11-62

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B. DCD_03.11-62 S01

Table 2.4.2-5 Reactor Coolant System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 9 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
14. Alarms and displays identified in Table 2.4.2-4 are provided in the MCR.	14.i Inspection will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Table 2.4.2-4.	14.i Alarms identified in Table 2.4.2-4 can be retrieved on the as-built A-VDU in the MCR.
	14.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.4.2-4, except for the following displays whose retrievability will be performed only on the as-built O-VDU in the MCR: RCS-SRV-120, 121, 122, 123; RCS-FT-022, 023, 024, 025, 032, 033, 034, 035, 042, 043, 044, 045, 052, 053, 054, 055; RCS-SE-028A, 038A, 048A, 058A; RCS-PT-061, 062, 063 and 064.	14.ii Displays identified in Table 2.4.2-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR, ~~,~~except for the following displays which can be retrieved only on the as-built O-VDU in the MCR: RCS-SRV-120, 121, 122, 123; RCS-FT-022, 023, 024, 025, 032, 033, 034, 035, 042, 043, 044, 045, 052, 053, 054, 055; RCS-SE-028A, 038A, 048A, 058A; RCS-PT-061, 062, 063 and 064.

MIC-04-T1-00008

MIC-04-T1-00005

Table 2.4.2-5 Reactor Coolant System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 10 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
15. Alarms, displays and controls identified in Table 2.4.2-4 are provided in the RSC.	15.i Inspection will be performed on the as-built O-VDU in the RSC for retrievability of the alarms identified in Table 2.4.2-4.	15.i Alarms identified in Table 2.4.2-4 can be retrieved on the as-built O-VDU in the RSC.
	15.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the RSC for retrievability of the displays identified in Table 2.4.2-4, except for the following displays whose retrievability will be performed only on the as-built O-VDU in the RSC: RCS-SRV-120, 121, 122, 123; RCS-FT-022, 023, 024, 025, 032, 033, 034, 035, 042, 043, 044, 045, 052, 053, 054, 055; RCS-SE-028A, 038A, 048A, 058A; ~~and~~ RCS-PT-061, 062, 063 and 064.	15.ii Displays identified in Table 2.4.2-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the RSC, except for the following displays which can be retrieved only on the as-built O-VDU in the RSC: RCS-SRV-120, 121, 122, 123; RCS-FT-022, 023, 024, 025, 032, 033, 034, 035, 042, 043, 044, 045, 052, 053, 054, 055; RCS-SE-028A, 038A, 048A, 058A; RCS-PT-061, 062, 063 and 064. MIC-04-T1-00005
	15.iii Tests will be performed for RSC control capability of equipment, identified in Table 2.4.2-4, on the as-built S-VDU.	15.iii RSC controls for equipment, identified in Table 2.4.2-4, on the as-built S-VDU provide the necessary output from the PSMS to operate the respective equipment.
	15.iv Tests will be performed on the as-built equipment, identified in Table 2.4.2-4, using controls on the as-built O-VDU in the RSC.	15.iv Controls on the as-built O-VDU in the RSC operate the as-built equipment identified in Table 2.4.2-4 with an RSC control function.

Table 2.4.2-5 Reactor Coolant System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 11 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
16. The piping identified in Table 2.4.2-3 as designed for leak-before-break (LBB) meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the piping.	16. Inspections and analyses of the as-built piping identified in Table 2.4.2-3 will be performed.	16. For piping identified in Table 2.4.2-3 that meets the LBB criteria, an LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built piping identified in Table 2.4.2-3 including material and material specifications, pipe geometry, support location and their characteristics, location and weight of components such as valves. For piping identified in Table 2.4.2-3 as a candidate for LBB but does not meet LBB criteria, an as-designed pipe break hazard analysis report(s) exists and concludes that for each postulated piping failure: i. Piping stresses in the containment penetration area are within allowable stress limits;. ii. Pipe whip restraints and jet shield designs can mitigate pipe break loads;. iii. Loads on safety-related SSCs are within design load limits. iv. The safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures.

MIC-04-T1-0 0005

MIC-04-T1-0 0005

transfer piping ~~and~~, refueling cavity drain piping and accumulator nitrogen vent piping, so as not to preclude accomplishment of the safety function. MIC-04-T1-00008

2.a.i The ASME Code Section III components of the ECCS identified in Table 2.4.4-2 are fabricated, installed and inspected in accordance with ASME Code Section III requirements.

2.a.ii The ASME Code Section III components of the ECCS identified in Table 2.4.4-2 are reconciled with the design requirements.

2.b.i The ASME Code Section III piping of the ECCS, including supports and design features described in the design basis to limit potential gas accumulation, identified in Table 2.4.4-3, is fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

2.b.ii The ASME Code Section III piping of the ECCS, including supports and design features described in the design basis to limit potential gas accumulation, identified in Table 2.4.4-3, is reconciled with the design requirements.

3.a Pressure boundary welds in ASME Code Section III components, identified in Table 2.4.4-2, meet ASME Code Section III requirements for non-destructive examination of welds.

3.b Pressure boundary welds in ASME Code Section III piping, identified in Table 2.4.4-3, meet ASME Code Section III requirements for non-destructive examination of welds.

4.a The ASME Code Section III components, identified in Table 2.4.4-2, retain their pressure boundary integrity at their design pressure.

4.b The ASME Code Section III piping, identified in Table 2.4.4-3, retains its pressure boundary integrity at its design pressure.

5.a The seismic Category I equipment, identified in Table 2.4.4-2, can withstand seismic design basis loads without loss of safety function.

5.b The seismic Category I piping, including supports, identified in Table 2.4.4-3 can withstand seismic design basis loads without a loss of its safety function.

6.a The ~~Class 1E~~ equipment identified in Table 2.4.4-2 as being qualified for a harsh environment, including non-metallic parts of active mechanical equipment, can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. DCD_03.11-62

6.b Class 1E equipment, identified in Table 2.4.4-2, is powered from its respective Class 1E division.

6.c Separation is provided between redundant divisions of ECCS Class 1E cables, and between Class 1E cables and non-Class 1E cables.

Table 2.4.4-2 Emergency Core Cooling System Equipment Characteristics (Sheet 4 of 4)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Safety Injection Pump Discharge Check Valves	SIS-VLV-004 A,B,C,D	2	Yes	No	-/-	—	Transfer Open	—
Safety Injection Pump Minimum Flow	SIS-FT-072, 073, 074, 075	—	Yes	—	Yes/Yes	—	—	—
Accumulator Water Level	SIS-LT-010, 020, 030,040	—	Yes	—	Yes/Yes	—	—	—
Accumulator Pressure	SIS-PT-010, 020, 030, 040	—	Yes	—	Yes/Yes	—	—	—
Safety Injection Pump Suction Pressure	SIS-PT-060, 061, 062, 063	—	Yes	—	Yes/No	—	—	—
Safety Injection Pump Discharge Pressure	SIS-PT-064, 065, 066, 067	—	Yes	—	Yes/No	—	—	—
Refueling Water Storage Pit Water Level	RWS-LT-010, 011, 012, 013	—	Yes	—	Yes/Yes	—	—	—
Safety Injection Pump Discharge Flow	SIS-FT-062, 063, 064, 065	—	Yes	—	Yes/No	—	—	—
Debris Interceptors	SIS-SST-001-A, B, C, D, E, F, G	—	Yes	—	-/-	—	—	—
RWSP Overflow Pipe Check Valves	RWS-VLV-078, 079	2	Yes	—	-/-	—	—	—
RWSP Sparger Nozzle	RWS-SNZ-001A, B	2	Yes	—	-/-	—	—	—

DCD_03.11-62

NOTE:

1. Dash (-) indicates not applicable.

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The functional arrangement of the ECCS is as described in the Design Description of Subsection 2.4.4.1 and in Table 2.4.4-1 and as shown in Figure 2.4.4-1.	1.a Inspection of the as-built ECCS will be performed.	1.a The as-built ECCS conforms to the functional arrangement as described in the Design Description of Subsection 2.4.4.1 and in Table 2.4.4-1 and as shown in Figure 2.4.4-1.
1.b Each mechanical division of the ECCS as shown in Figure 2.4.4-1 is physically separated from the other divisions, with the exception of NaTB baskets and containers, NaTB transfer piping ~~and~~, refueling cavity drain piping and accumulator nitrogen vent piping, so as not to preclude accomplishment of the safety function.	1.b Inspections and analysis of the as-built ECCS will be performed.	1.b A report exists and concludes that each mechanical division of the as-built ECCS as shown in Figure 2.4.4-1 is physically separated from other mechanical divisions of the system by spatial separation, barriers, or enclosures, with the exception of NaTB baskets and containers, NaTB transfer piping, ~~and~~ refueling cavity drain piping and accumulator nitrogen vent piping, so as to assure that the functions of the safety-related system are maintained considering postulated dynamic effects (i.e., missile and pipe break hazard), internal flooding and fire. MIC-04-T1-00008
2.a.i The ASME Code Section III components of the ECCS, identified in Table 2.4.4-2 are fabricated, installed and inspected in accordance with ASME Code Section III requirements.	2.a.i Inspection of the as-built ASME Code Section III components of the ECCS, identified in Table 2.4.4-2, will be performed.	2.a.i The ASME Code Section III data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III components of the ECCS identified in Table 2.4.4-2 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.
2.a.ii The ASME Code Section III components of the ECCS identified in Table 2.4.4-2 are reconciled with the design requirements.	2.a.ii A reconciliation analysis of the components identified in Table 2.4.4-2 using as-designed and as-built information and ASME Code Section III design report(s) (NCA-3550) will be performed.	2.a.ii The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that the design reconciliation has been completed in accordance with the ASME Code Section III for the as-built components of the ECCS identified in Table 2.4.4-2. The report documents the results of the reconciliation analysis.

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	7.b.ii The as-built safety injection pump injection test will be performed. Analysis will be performed to convert the test results into a pump differential head.	7.b.ii A report exists and concludes that each as-built safety injection pump has a pump differential head of no less than 3937 ft and no more than 4527 ft at the minimum flow, injects no less than 1259 gpm and no more than 1462 gpm of RWSP water into the reactor vessel at atmospheric pressure, and that the minimum flow rate through the as-built SIS minimum flow line is greater than the required pump minimum flow rate.
	7.b.iii.a Deleted.	7.b.iii.a Deleted.
	7.b.iii.b Inspections and analyses of the as-built RWSP will be conducted.	7.b.iii.b A report exists and concludes that the volume of the as-built RWSP is at least 84,750 ft^3.
	7.b.iv Inspection and analysis of the as-built ECC/CS suction strainers will be conducted.	7.b.iv A report exists and concludes that each of the four as-built ECC/CS suction strainers have the following features: • stainless steel materials of construction for corrosion resistance; MIC-04-T1-00005 • a minimum strainer surface area of 2,754 ft^2; MIC-04-T1-00005 • perforated plate with maximum hole diameter of 0.066 inches; MIC-04-T1-00005 • remains submerged under design basis accident conditions; MIC-04-T1-00005 • achieves head loss consistent with design basis NPSH evaluations. MIC-04-T1-00005

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8. Controls are provided in the MCR to open and close the remotely operated valves identified in Table 2.4.4-4.	8.i Tests will be performed for MCR control capability of the remotely operated valves, identified in Table 2.4.4-4, on the as-built S-VDU.	8.i MCR controls for the remotely operated valves, identified in Table 2.4.4-4, on the as-built S-VDU provide the necessary output from the PSMS to open and close the respective valves.
	8.ii Tests will be performed on the as-built remotely operated valves identified in Table 2.4.4-4 using controls on the as-built O-VDU in the MCR.	8.ii Controls on the as-built O-VDU in the MCR open and close the as-built remotely operated valves identified in Table 2.4.4-4 with the MCR control function.
9.a The valves identified in Table 2.4.4-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i Type tests or a combination of type tests and analyses of valves identified in Table 2.4.4-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i A report exists and concludes that each valve identified in Table 2.4.4-2 as having an active safety function changes position as indicated in Table 2.4.4-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.
	9.a.ii Tests of the as-built valves identified in Table 2.4.4-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built valve identified in Table 2.4.4-2 as having an active safety function changes position as indicated in Table 2.4.4-2 under preoperational test conditions.
	9.a.iii Inspections will be performed of the as-built valves identified in Table 2.4.4-2 as having an active safety function.	9.a.iii Each as-built valve identified in Table 2.4.4-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
	9.a.iv Deleted.	9.a.iv Deleted.
9.b After loss of motive power, the remotely operated valves, identified in Table 2.4.4-2, assume the indicated loss of motive power position.	9.b. Tests of the as-built remotely operated valves identified in Table 2.4.4-2 will be performed under the conditions of loss of motive power.	9.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.4.4-2 assumes the indicated loss of motive power position.

MIC-04-T1-0 0005

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 10 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
12. Alarms, displays and controls identified in Table 2.4.4-4 are provided in the RSC.	12.i Inspection will be performed on the as-built O-VDU in the RSC for retrievability of the alarms identified in Table 2.4.4-4.	12.i Alarms identified in Table 2.4.4-4 can be retrieved on the as-built O-VDU in the RSC.	MIC-04-T1-00005
	12.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the RSC for retrievability of the displays identified in Table 2.4.4-4.	12.ii Displays identified in Table 2.4.4-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the RSC.	MIC-04-T1-00005
	12.iii Tests will be performed for RSC control capability of equipment, identified in Table 2.4.4-4, on the as-built S-VDU.	12.iii RSC controls for equipment, identified in Table 2.4.4-4, on the as-built S-VDU provide the necessary output from the PSMS to operate the respective equipment.	MIC-04-T1-00005
	12.iv Tests will be performed on the as-built equipment, identified in Table 2.4.4-4, using controls on the as-built O-VDU in the RSC.	12.iv Controls on the as-built O-VDU in the RSC operate the as-built equipment identified in Table 2.4.4-4 with an RSC control function.	MIC-04-T1-00005

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 11 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
13. The piping identified in Table 2.4.4-3 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	13. Inspections and analyses of the as-built piping identified in Table 2.4.4-3 will be performed.	13. For piping identified in Table 2.4.4-3 that meets the LBB criteria, an LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built piping identified in Table 2.4.4-3 including material and material specifications, pipe geometry, support location and their characteristics, location and weight of components such as valves. For piping identified in Table 2.4.4-3 as a candidate for LBB but does not meet LBB criteria, an as-designed pipe break hazard analysis report(s) exists and concludes that for each postulated piping failure: i. Piping stresses in the containment penetration area are within allowable stress limits,. ii. Pipe whip restraints and jet shield designs can mitigate pipe break loads,. iii. Loads on safety-related SSCs are within design load limits. iv. The safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures.
14.a Deleted.	14.a Deleted.	14.a Deleted.
14.b Deleted.	14.b Deleted.	14.b Deleted.

MIC-04-T1-0 0005

MIC-04-T1-0 0005

Table 2.4.4-5 Emergency Core Cooling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 12 of 12)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
15. The pumps identified in Table 2.4.4-2 can perform their safety functions under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions.	15.i Type tests or a combination of type tests and analyses of each pump identified in Table 2.4.4-2 will be performed to demonstrate the ability of the pump to perform its safety function under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions.	15.i A report exists and concludes that the pumps identified in Table 2.4.4-2 can perform their safety functions under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions. MIC-04-T1-00005
	15.ii Inspections will be performed of each as-built pump identified in Table 2.4.4-2.	15.ii Each as-built pump identified in Table 2.4.4-2 is bounded by the type tests, or a combination of type tests and analyses.
16 Dynamic restraints of seismic Category I piping identified in Table 2.4.4-3 can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function.	16.i Type tests or a combination of type tests and analyses using the design environmental conditions, or under the conditions which bound the design environmental conditions, will be performed on the dynamic restraints of seismic Category I piping identified in Table 2.4.4-3.	16.i A report exists and concludes that the dynamic restraints of seismic Category I piping identified in Table 2.4.4-3 can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function. DCD_03.11-62
	16.ii Inspection will be performed of the as-built dynamic restraints of seismic Category I piping identified in Table 2.4.4-3.	16.ii The as-built dynamic restraints of seismic Category I piping identified in Table 2.4.4-3. are bounded by type tests or a combination of type tests and analyses.

Table 2.4.4-6 Requirement for Accumulator System Resistance Coefficient (Sheet 1 of 2)

Operation mode	Resistance coefficient of accumulator system (based on a cross-section area of 0.6827 ft^2)
Large flow injection	$\geq \frac{1}{[x\{0.7787 - 0.6889\exp(-0.5238\sigma_V)\}]^2} + 461.7f + 1.99$ $\leq \frac{1}{[y\{0.7787 - 0.6889\exp(-0.5238\sigma_V)\}]^2} + 564.3f + 2.21$ Where σ_V: Cavitation Ffactor σ_i: 1/2 scale test iInstrument Uncertainty as relative standard uncertaintydeviation σ_D: 1/2 scale dDispersion Deviation from experimental equations as relative standard uncertaintydeviation σ_m: Manufacturing Error as relative standard uncertaintydeviation u_{scale}: Standard (1σ) uncertainty of the scale effect δCv_{scale}: Scaleing eEffect average bias LOCA Scaling Bias: Additional Bias applied to LOCA analysis u_{scale}: Scale effect standard uncertainty f: Friction Ffactor $x = 1 + \left[1.96(\sigma_i^2 + \sigma_D^2 + \sigma_m^2 + u_{scale}^2)^{1/2} + \delta Cv_{scale}\right]$ $x = 1 + \left[1.645(\sigma_i^2 + \sigma_D^2 + \sigma_m^2)^{\frac{1}{2}}\right] + [1.645\lvert u_{scale}\rvert + \delta Cv_{scale}]$ $y = 1 - \left[1.96(\sigma_i^2 + \sigma_D^2 + \sigma_m^2 + u_{scale}^2)^{1/2} + \delta Cv_{scale}\right]$ $y = 1 - \left[1.645(\sigma_i^2 + \sigma_D^2 + \sigma_m^2)^{\frac{1}{2}}\right] + [LOCAScalingBias]$

MIC-04-T1-0 0004

Table 2.4.4-6 Requirement for Accumulator System Resistance Coefficient (Sheet 2 of 2)

Operation mode	**Resistance coefficient of accumulator system** (based on a cross-section area of 0.6827 ft^2)
Small flow injection	$\geq \frac{1}{[x\{0.07197-0.01904\exp(-6.818\sigma_V)\}]^2}+461.7f+1.99$ $\leq \frac{1}{[y\{0.07197-0.01904\exp(-6.818\sigma_V)\}]^2}+564.3f+2.21$ Where σ_V: Cavitation ~~F~~factor σ_i: ~~1/2 scale test i~~Instrument Uncertainty as relative standard ~~uncertainty~~deviation σ_D: ~~1/2 scale d~~Dispersion Deviation from experimental equations as relative standard ~~uncertainty~~deviation σ_m: Manufacturing Error as relative standard ~~uncertainty~~deviation u_{scale}: Standard (1σ) uncertainty of the scale effect δCv_{scale}: Scal~~e~~ing ~~e~~Effect average bias LOCA Scaling Bias: Additional Bias applied to LOCA analysis ~~u_{scale}: Scale effect standard uncertainty~~ f: Friction ~~F~~factor ~~$x = 1+\left[1.96(\sigma_i^2+\sigma_D^2+\sigma_m^2+u_{scale}^2)^{1/2}+\delta Cv_{scale}\right]$~~ $x = 1+\left[1.645(\sigma_i^2+\sigma_D^2+\sigma_m^2)^{\frac{1}{2}}\right]+[1.645\lvert u_{scale}\rvert+\delta Cv_{scale}]$ ~~$y = 1-\left[1.96(\sigma_i^2+\sigma_D^2+\sigma_m^2+u_{scale}^2)^{1/2}+\delta Cv_{scale}\right]$~~ $y = 1-\left[1.645(\sigma_i^2+\sigma_D^2+\sigma_m^2)^{\frac{1}{2}}\right]+[LOCAScalingBias]$

MIC-04-T1-00004

Table 2.4.5-2 Residual Heat Removal System Equipment Characteristics (Sheet 3 of 3)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
1st RHR Discharge Line Check Valves	RHS-VLV-028A, B, C, D	1	Yes	No	-/-Yes	-	Transfer Open	-
Containment Spray / Residual Heat Removal Pump Discharge Flow	RHS-FT-011, 021, 031, 041	—	Yes	—	Yes/No	-	—	—
Containment Spray / Residual Heat Removal Pump Minimum Flow	RHS-FT-014, 024, 034, 044	—	Yes	—	Yes/No	-	—	—
Containment Spray / Residual Heat Removal Pump Suction Pressure	RHS-PT-010, 020, 030, 040	—	Yes	—	Yes/No	-	—	—
Containment Spray / Residual Heat Removal Pump Discharge Pressure	RHS-PT-011, 021, 031, 041	—	Yes	—	Yes/No	-	—	—
Containment Spray / Residual Heat Removal Heat Exchanger Outlet Temperature	RHS-TE-014, 024, 034, 044	—	Yes	—	Yes/Yes	-	—	—

DCD_03.11-62

NOTE:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62
DCD_03.11-62 S01

Table 2.4.5-5 Residual Heat Removal System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 11)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
9. Controls are provided in the MCR to open and close the remotely operated valves identified in Table 2.4.5-4.	9.i Tests will be performed for MCR control capability of the remotely operated valves, identified in Table 2.4.5-4, on the as-built S-VDU.	9.i MCR controls for the remotely operated valves, identified in Table 2.4.5-4, on the as-built S-VDU provide the necessary output from the PSMS to open and close the respective valves.	MIC-04-T1-0 0005
	9.ii Tests will be performed on the as-built remotely operated valves identified in Table 2.4.5-4 using controls on the as-built O-VDU in the MCR.	9.ii Controls on the as-built O-VDU in the MCR open and close the as-built remotely operated valves identified in Table 2.4.5-4 with the MCR control function.	
10.a The valves identified in Table 2.4.5-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	10.a.i Type tests or a combination of type tests and analyses of the valves identified in Table 2.4.5-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	10.a.i A report exists and concludes that each valve identified in Table 2.4.5-2 as having an active safety function changes position as indicated in Table 2.4.5-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	
	10.a.ii Tests of the as-built valves identified in Table 2.4.5-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	10.a.ii Each as-built valve identified in Table 2.4.5-2 as having an active safety function changes position as indicated in Table 2.4.5-2 under preoperational test conditions.	
	10.a.iii Inspections will be performed of the as-built valves identified in Table 2.4.5-2 as having an active safety function.	10.a.iii Each as-built valve identified in Table 2.4.5-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.	
	10.a.iv Deleted.	10.a.iv Deleted.	MIC-04-T1-0 0005
10.b After loss of motive power, the remotely operated valves, identified in Table 2.4.5-2, assume the indicated loss of motive power position.	10.b Tests of the as-built remotely operated valves identified in Table 2.4.5-2 will be performed under the conditions of loss of motive power.	10.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.4.5-2 assumes the indicated loss of motive power position.	

Table 2.4.5-5 Residual Heat Removal System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 9 of 11)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
11. Controls are provided in the MCR to start and stop the CS/RHR pumps identified in Table 2.4.5-4.	11.i Tests will be performed for MCR control capability of the CS/RHR pumps, identified in Table 2.4.5-4, on the as-built S-VDU.	11.i MCR controls for the CS/RHR pumps, identified in Table 2.4.5-4, on the as-built S-VDU provide the necessary output from the PSMS to start and stop the respective pumps.
	11.ii Tests will be performed on the as-built CS/RHR pumps identified in Table 2.4.5-4 using controls on the as-built O-VDU in the MCR.	11.ii Controls on the as-built O-VDU in the MCR start and stop the as-built CS/RHR pumps identified in Table 2.4.5-4 with the MCR control function.
12. Alarms and displays identified in Table 2.4.5-4 are provided in the MCR.	12.i Inspection will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Table 2.4.5-4.	12.i Alarms identified in Table 2.4.5-4 can be retrieved on the as-built A-VDU in the MCR.
	12.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.4.5-4.	12.ii Displays identified in Table 2.4.5-4 can be retrieved on the as-built S-VDU and as-built O-VDU in the MCR.
13. Alarms, displays and controls identified in Table 2.4.5-4 are provided in the RSC.	13.i Inspection will be performed on the as-built O-VDU in the RSC for retreivability of the alarms identified in Table 2.4.5-4.	13.i Alarms identified in Table 2.4.5-4 can be retrieved on the as-built O-VDU in the RSC.
	13.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the RSC for retrievability of the displays identified in Table 2.4.5-4.	13.ii Displays identified in Table 2.4.5-4 can be retrieved on the as-built S-VDU and as-built O-VDU in the RSC.
	13.iii Tests will be performed for RSC control capability of equipment, identified in Table 2.4.5-4, on the as-built S-VDU.	13.iii RSC controls for equipment, identified in Table 2.4.5-4, on the as-built S-VDU provide the necessary output from the PSMS to operate the respective equipment.
	13.iv Tests will be performed on the as-built equipment, identified in Table 2.4.5-4, using controls on the as-built O-VDU in the RSC.	13.iv Controls on the as-built O-VDU in the RSC operate the as-built equipment identified in Table 2.4.5-4 with an RSC control function.

Table 2.4.5-5 Residual Heat Removal System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 10 of 11)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
14. The piping identified in Table 2.4.5-3 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	14. Inspections and analyses of the as-built piping identified in Table 2.4.5-3 will be performed.	14. For piping identified in Table 2.4.5-3 that meets the LBB criteria, an LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built piping identified in Table 2.4.5-3 including material and material specifications, pipe geometry, support location and their characteristics, location and weight of components such as valves. For piping identified in Table 2.4.5-3 as a candidate for LBB but does not meet LBB criteria, an as-designed pipe break hazard analysis report(s) exists and concludes that for each postulated piping failure: i. Piping stresses in the containment penetration area are within allowable stress limits~~,~~. ii. Pipe whip restraints and jet shield designs can mitigate pipe break loads~~,~~. iii. Loads on safety-related SSCs are within design load limits. iv. The safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.4.5-5 Residual Heat Removal System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 11 of 11)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
15.a Deleted.	15.a Deleted.	15.a Deleted.
15.b Deleted.	15.b Deleted.	15.b Deleted.
16. The pumps identified in Table 2.4.5-2 can perform their safety functions under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions.	16.i -Type tests or a combination of type tests and analyses of each pump identified in Table 2.4.5-2 will be performed to demonstrate the ability of the pump to perform its safety function under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions.	16.i A report exists and concludes that the pumps identified in Table 2.4.5-2 can perform their safety functions under expected ranges of fluid flow, pump head, electrical conditions, and temperature conditions up to and including design-basis conditions.
	16.ii Inspections will be performed of each as-built pump identified in Table 2.4.5-2.	16.ii Each as-built pump identified in Table 2.4.5-2 is bounded by the type tests, or a combination of type tests and analyses.
17. Dynamic restraints of seismic Category I piping identified in Table 2.4.5-3 can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function.	17.i Type tests or a combination of type tests and analyses using the design environmental conditions, or under the conditions which bound the design environmental conditions, will be performed on the dynamic restraints of seismic Category I piping identified in Table 2.4.5-3.	17.i A report exists and concludes that the dynamic restraints of seismic Category I piping identified in Table 2.4.5-3 can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function.
	17.ii Inspection will be performed of the as-built dynamic restraints of seismic Category I piping identified in Table 2.4.5-3.	17.ii The as-built dynamic restraints of seismic Category I piping identified in Table 2.4.5-3. are bounded by type tests or a combination of type tests and analyses.

MIC-04-T1-00005

DCD_03.11-62

Table 2.4.6-2 Chemical and Volume Control System Equipment Characteristics (Sheet 6 of 6)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Charging pump alternate makeup line check valve	CVS-VLV-594	3	Yes	No	— / —	—	Transfer Open	—
Charging pump alternate makeup line check valve	CVS-VLV-595	3	Yes	No	— / —	—	Transfer Open-	—
Charging Flow	CVS-FT-048, 049	—	Yes	—	Yes/No	—	—	—
Primary Makeup Water Supply Flow	CVS-FT-128, 129	—	Yes	—	Yes/No	—	—	—

DCD_03.11-62

DCD_07.05-18 S02

NOTE:

1. Dash (—) indicates not applicable.

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.4.6-4 Chemical and Volume Control System Equipment, Alarms, Displays, and Control Functions

Equipment Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Charging Pump (Run Status)	No	Yes	Yes	Yes
Charging Flow (CVS-FT-048, 049)	Yes	Yes	No	Yes
Primary Makeup Water Supply Flow (CVS-F~~ICA~~T-128,129)	Yes	Yes	No	Yes
Letdown Containment Isolation Valves (CVS-AOV-005,006)	No	Yes	Yes	Yes
CVCS Charging Line Containment Isolation Valve (CVS-MOV-152)	No	Yes	Yes	Yes
RCP Seal Injection Line Containment Isolation Valves (CVS-MOV-178 A, B, C, D)	No	Yes	Yes	Yes
RCP Seal Return Line Containment Isolation Valves (CVS-MOV-203,204)	No	Yes	Yes	Yes
Volume Control Tank Outlet Valves (CVS-LCV-031 B, C)	No	Yes	Yes	Yes
Charging Pump Alternate Makeup Valves (CVS-LCV-031 D,E,F,G)	No	Yes	Yes	Yes
CVCS Charging Line Isolation Valve (CVS-MOV-151)	No	Yes	Yes	Yes
Auxiliary Pressurizer Spray Line Isolation Valve (CVS-AOV-155)	No	Yes	Yes	Yes
CVCS Charging Line Isolation Valve (CVS-AOV-159)	No	Yes	Yes	Yes
Air Operated Valves (CVS-AOV-192 A, B, C, D)	No	Yes	Yes	Yes
Air Operated Valves (CVS-AOV-196 A, B, C, D)	No	Yes	Yes	Yes
Primary Makeup Water Supply Isolation Valves (CVS-FCV-128, 129)	No	Yes	Yes	Yes
Excess Letdown Isolation Valves (CVS-AOV-221, 222)	No	Yes	Yes	Yes
CVCS Letdown Line Isolation Valve (CVS-LCV-361)	No	Yes	Yes	Yes
CVCS Letdown Line Isolation Valve (CVS-LCV-362)	No	Yes	Yes	Yes

DCD_07.05-18 S02

DCD_07.05-18 S02

Table 2.4.6-5 Chemical and Volume Control System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 5 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8.a The CVCS provides makeup capability to maintain the RCS volume.	8.a A test of the as-built CVCS will be performed to measure the makeup flow rate.	8.a Each as-built CVCS charging pump delivers a flow rate to the RCS of greater than or equal to 160 gpm at normal operating pressure of RCS.
8.b Deleted.	8.b Deleted.	8.b Deleted.
8.c The CVCS supplies seal water to the RCP seals.	8.c A test of the as-built CVCS will be performed by aligning a flow path to each RCP.	8.c Each as-built CVCS charging pump provides a flow rate of greater than or equal to 8 gpm to each RCP.
9. Controls are provided in the MCR to open and close the remotely operated valves identified in Table 2.4.6-4.	9.i Tests will be performed for MCR control capability of the remotely operated valves, identified in Table 2.4.6-4, on the as-built S-VDU.	9.i MCR controls for the remotely operated valves, identified in Table 2.4.6-4, on the as-built S-VDU provide the necessary output from the PSMS to open and close the respective valves.
	9.ii Tests will be performed on the as-built remotely operated valves identified in Table 2.4.6-4 using controls on the as-built O-VDU in the MCR.	9.ii Controls on the as-built O-VDU in the MCR open and close the as-built remotely operated valves identified in Table 2.4.6-4 with the MCR control function.
10.a. The valves identified in Table 2.4.6-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	10.a.i Type tests or a combination of type tests and analyses of the valves identified in Table 2.4.6-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	10.a.i A report exists and concludes that each valve identified in Table 2.4.6-2 as having an active safety function changes position as indicated in Table 2.4.6-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.

MIC-04-T1-00005

Table 2.4.6-5 Chemical and Volume Control System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	10.a.ii Tests of the as-built valves identified in Table 2.4.6-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	10.a.ii Each as-built valve identified in Table 2.4.6-2 as having an active safety function changes position as indicated in Table 2.4.6-2 under preoperational test conditions.
	10.a.iii Inspections will be performed of the valves identified in Table 2.4.6-2 as having an active safety function.	10.a.iii Each as-built valve identified in Table 2.4.6-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
	10.a.iv Deleted.	10.a.iv Deleted.
10.b After loss of motive power, the remotely operated valves, identified in Table 2.4.6-2, assume the indicated loss of motive power position.	10.b Tests of the as-built remotely operated valves identified in Table 2.4.6-2 will be performed under the conditions of loss of motive power.	10.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.4.6-2 assumes the indicated loss of motive power position.
11. Controls are provided in the MCR to start and stop the charging pumps identified in Table 2.4.6-4.	11.i Tests will be performed for MCR control capability of the charging pumps, identified in Table 2.4.6-4, on the as-built S-VDU.	11.i MCR controls for the charging pumps, identified in Table 2.4.6-4, on the as-built S-VDU provide the necessary output from the PSMS to start and stop the respective pumps.
	11.ii Tests will be performed on the as-built charging pumps identified in Table 2.4.6-4 using controls on the as-built O-VDU in the MCR.	11.ii Controls on the as-built O-VDU in the MCR start and stop the as-built charging pumps identified in Table 2.4.6-4 with the MCR control function.

MIC-04-T1-0 0005

MIC-04-T1-0 0005

Table 2.5.1-6 RT System and ESF System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 14)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
17.a The PSMS has self-diagnostic functions to facilitate recognition, location, replacement, repair and adjustment of malfunctioning components or modules.	17.a Type tests and analyses of the as-built PSMS will be performed using simulated failure condition.	17.a A report exists and concludes that the as-built PSMS has the self-diagnostic functions to facilitate recognition, location, replacement, repair and adjustment of malfunctioning components or modules.
17.b A single channel or division of the PSMS can be bypassed to allow on-line testing, maintenance or repair and this capability does not prevent the PSMS from performing its safety function.	17.b.i A test will be performed on the 2-out-of-4 voting logic in the as-built RPS by providing simulated process signals, identified in Tables 2.5.1-2 and 2.5.1-3, to at least two of three non-bypassed divisions of the as-built RPS input under the manual single division bypass operation from the as-built safety VDU in the MCR.	17.b.i When the 2-out-of-4 voting logic in the non-bypassed divisions of each as-built RPS receives at least two of three actuation signals, identified in Tables 2.5.1-2 and Table 2.5.1-3, from the respective non-bypassed divisions, the 2-out-of-4 voting logic in the non-bypassed divisions of each as-built RPS provides the actuation signal for the reactor trip and automatic ESF functions identified in the tables.
	17.b.ii A test will be performed on each the 2-out-of-4 voting logic in the as-built RPS by providing simulated actuation signals, identified in Tables 2.5.1-2 and 2.5.1-3, to at least two of three non-bypassed channels of the as-built RPS input under the manual single channel bypass operation of the respective actuation signals from the as-built safety VDU in the MCR.	17.b.ii When the 2-out-of-4 voting logic of each as-built RPS receives at least two of three actuation signals, identified in Tables 2.5.1-2 and Table 2.5.1-3, from the respective non-bypassed channels, the 2-out-of-4 voting logic in each as-built RPS provides the actuation signal for the reactor trip and the ESF function identified in the tables.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.5.1-6 RT System and ESF System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 11 of 14)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	24.iv An inspection will be performed for the implementation phase result summary report of PSMS software in accordance with the SPM.	24.iv The implementation phase result summary report exists and concludes that the implementation phase activities of PSMS software are performed in accordance with the US-APWR SPM.
	24.v An inspection will be performed for the test phase result summary report of PSMS software in accordance with the SPM.	24.v The test phase result summary report exists and concludes that the test phase activities of PSMS software are performed in accordance with the US-APWR SPM.
	24.vi An inspection will be performed for the installation phase result summary report of PSMS software in accordance with the SPM.	24.vi The installation phase result summary report exists and concludes that the installation phase activities of PSMS software are performed in accordance with the US-APWR SPM.
25.a Manual controls from the O-VDU are blocked from the S-VDU by the priority logic in the PSMS and can be disabled manually from the S-VDU by the disable switch.	25.a.i A test of the as-built PSMS will be performed using manual controls from the as-built S-VDU in the MCR and manual controls from the as-built O-VDU in the MCR.	25.a.i The as-built PSMS generates output signals corresponding to the manual control signals, from the as-built S-VDU in the MCR, even when the as-built PSMS receives manual controls from the as-built O-VDU in the MCR.
	25.a.ii A test of the as-built PSMS will be performed using each disable switch on the as-built S-VDU in the MCR to disable manual controls from the as-built O-VDU in the MCR.	25.a.ii The as-built PSMS does not generate output signals from the manual controls of the as-built O-VDU in the MCR when the disable switch in the as-built S-VDU in the MCR is enabled.
	25.a.iii Deleted.	25.a.iii Deleted.

MIC-04-T1-0 0005

Table 2.5.3-4 Diverse Actuation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.e The DAS prevents spurious actuation due to single failures or due to a fire or safe shutdown earthquake (SSE). Spurious actuations are prevented by the DAS as follows: • Automatic DAS functions are actuated by four subsystems and DAS actuation needs coincident outputs from at least two selected DAAC subsystems satisfying 2-out-of-2 voting logic after taking 1-out-of-2 voting logic twice. • The DAS prevents spurious actuation due to a SSE. Thus the SSE will not result in a DAS failure that adversely affects the PSMS. • The redundant DAAC subsystems are located in separate fire areas to prevent spurious actuation from a fire in one area. • Manual DAS functions identified in Tables 2.5.3-2 and 2.5.3-3 require actuation of two switches in the MCR. Separation between the permissive switch and the DHP prevents a fire from one switch location from affecting the other switch location.	1.e.i Test and analysis will be performed to verify the as-built DAS prevents spurious actuation due to single failures or due to a SSE.	1.e.i A report exists and concludes that the as-built DAS prevents spurious actuation due to single failures or due to a SSE as follows.: MIC-04-T1-00005 • Automatic DAS functions are actuated by four as-built subsystems and DAS actuation needs coincident outputs from at least two selected DAAC subsystems satisfying 2-out-of-2 voting logic after taking 1-out-of-2 voting logic twice. • The as-built DAAC subsystems prevents spurious actuation due to a SSE.

Table 2.5.3-4 Diverse Actuation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	1.e.ii Test and inspection of the as-built DAS will be performed to verify the existence of a manual permissive switch, to verify the DAS permissive switch is physically located separate from the DHP, and to verify physical separation of redundant DA~~C~~AC cabinets.	1.e.ii The as-built DAS: • Redundant DAAC subsystems are located in separate equipment rooms. • Includes a manual permissive switch that prevents spurious manual actuation for those signals with only one manual actuation switch, as identified in Table 2.5.3-3. • The manual permissive switch is physically separated from the DHP to prevent a fire that starts in one switch location from affecting the other switch location.
2. The DAS has the following capabilities: • The system can be tested manually without causing component actuation. • Loss of power or removal of a module does not cause spurious DAS actuation. • Capability to bypass failed sensors functions.	2. Tests of the as-built DAS will be performed. The tests will include tests of the manual controls, loss of power, and module removal, as well as simulated signal inputs to test the system.	2. A report exists and concludes that the as-built DAS has the following capabilities: • The system can be tested manually without causing component actuation. • Loss of power or removal of a module does not cause spurious DAS actuation. • Capability to bypass failed sensors functions.
3. The DAS equipment, including input and output interfaces, signal processing and HSI, consists of conventional hardware circuits (analog circuits, solid-state logic processing, relay circuits, switches, indicators).	3. Inspection of the as-built DAS will be performed.	3. The as-built DAS equipment consists of conventional hardware circuits (analog circuits, solid-state logic processing, relay circuits, switches, indicators).

MIC-04-T1_00002

Table 2.5.4-1 Post Accident Monitoring Variables

Reactor Coolant Hot Leg Temperature (Wide Range)
Reactor Coolant Cold Leg Temperature (Wide Range)
Reactor Coolant Pressure
Degrees of Subcooling
Pressurizer Water Level
Steam Generator Water Level (Wide Range)
Steam Generator Water Level (Narrow Range)
Main Steam Line Pressure
Emergency Feedwater Flow
Wide Range Neutron Flux
Core Exit Temperature
Containment Pressure
Reactor Vessel Water Level
Containment Isolation Valve Position (Excluding Check Valves)
Refueling Water Storage Pit Water Level (Wide Range)
Refueling Water Storage Pit Water Level (Narrow Range)
Emergency Feedwater Pit Water Level
Containment High Range Area Radiation
Charging Flow

DCD_07.05-18 S02

Table 2.5.4-3 Alarms for Credited Manual Operator Actions

Control Rod Insertion Limit Alarm
Reactor Makeup Water Flow Rate Deviation Alarm
Boric Acid Flow Rate Deviation Alarm
High Primary Makeup Water Flow Rate Alarm
Main Steam Line Radiation (N-16) Alarm
Low Pressurizer Water Level against Program Water Level Alarm
Containment High Range Area Radiation Alarm
Low Volume Control Tank Water Level Alarm
High Charging Flow Alarm

DCD_07.05-18 S02

2.5.6 Data Communication Systems

2.5.6.1 Design Description

The data communication systems (DCS) consist of:

- Plant-wide unit bus
- Safety bus (for each PSMS division)
- Data links for point-to-point communication
- Input/Output (I/O) bus
- Maintenance network for each PSMS division and the PCMS

The DCS is a distributed and highly interconnected system as shown in Figure 2.5.6-1, which has communication independence to prevent electrical and communication processing faults in one safety division (or the non-safety PCMS) from adversely affecting the performance of safety functions in other divisions. Qualified fiber-optic isolators are used to prevent electrical faults from transferring between divisions, and between safety and non-safety systems. Communication faults are prevented through data integrity verification.

A non-redundant non-safety multi-drop maintenance network is provided separately within each PSMS division and within the PCMS. The maintenance network is used to transmit signals between the engineering tools and the PSMS or PCMS system management module of each controller.

1. Deleted.

2. Deleted.

3. The DCS provides external networks with a communications link via the unit management computer (UMC) which is connected to the unit bus. ~~The UMC provides a firewalled~~The isolation device, which is located between the UMC and the station bus, provides a hardware-based unidirectional interface, which allows only outbound communication from the unit bus to external networks. There are no other connections from external sources to the DCS. MIC-04-T1-00001

4. The safety-related portions of the DCS are located in a facility area that provides protection from accident related hazards such as missiles, pipe breaks and flooding.

5. The PSMS application setpoints, constants and application software are changeable only by removing the CPU module that contains the memory devices from the controller and placing it in a dedicated re-programming chassis.

6. Digital communication independence is achieved by the DCS communication processors that are independent of RT and ESF actuation processing functions of the redundant divisions of the PSMS, and also between non-safety systems and the PSMS. DCD_07.09-26 S01

Table 2.5.6-1 Data Communication Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 2)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. Deleted.	1. Deleted.	1. Deleted.
2. Deleted.	2. Deleted.	2. Deleted.
3. The DCS provides external networks with a communications link via the unit management computer (UMC) which is connected to the unit bus. ~~The UMC provides a firewalled~~The isolation device, which is located between the UMC and the station bus, provides a hardware-based unidirectional interface, which allows only outbound communication from the unit bus to external networks. There are no other connections from external sources to the DCS.	3. Inspection and analyses of the as-built DCS will be performed.	3 A report exists and concludes that: (1) the as-built DCS provides external networks with a communications link via the as-built unit management computer (UMC), which is connected to the as-built unit bus; (2) the as-built ~~UMC provides a firewalled~~ isolation device, which is located between the UMC and the station bus, provides a hardware-based unidirectional interface, which allows only outbound communication from the as-built unit bus to external networks; and (3) there are no other connections from external sources to the as-built DCS. MIC-04-T1_00001
4. The safety-related portions of the DCS are located in a facility area that provides protection from accident related hazards such as missiles, pipe breaks and flooding.	4. Inspection and analyses will be performed on the safety-related portion of the as-built DCS equipment.	4. A report exists and concludes that the safety- related portions of the as-built DCS are located in an as-built facility area that provides protection from accident related hazards such as missiles, pipe breaks and flooding.

Table 2.5.6-1 Data Communication Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 2)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
5. The PSMS application setpoints, constants and application software are changeable only by removing the CPU module that contains the memory devices from the controller and placing it in a dedicated re-programming chassis.	5. Type tests of the PSMS changeability will be performed.	5. The PSMS application setpoints, constants and application software are changeable only by removing the CPU module that contains the memory devices from the controller and placing it in a dedicated re-programming chassis.	
6. Digital communication independence is achieved by the DCS communication processors that are independent of RT and ESF actuation processing functions of the redundant divisions of the PSMS, and also between non-safety systems and the PSMS.	6.i An inspection of the as-built PSMS will be performed to verify the DCS communication processors are installed.	6.i ~~C~~The DCS communication processors exist in the as-built PSMS for digital communication between redundant divisions of the PSMS and between non-safety systems and the PSMS.	DCD_07.09-26 S01 DCD_07.09-26 S01
	6.ii Type tests or analyses, or a combination of type tests and analyses of the digital communication independence will be performed.	6.ii A report exists and concludes that digital communication independence is achieved by the DCS communication processors that are independent of trip and actuation processing functions.	DCD_07.09-26 S01
	~~6.iii Type tests or analyses, or a combination of type tests and analyses of fault mitigation functions of the communication processors for the DCS will be performed.~~	~~6.iii A report exists and concludes that the communication processors for the DCS can mitigate the design basis communication faults of the DCS.~~	DCD_07.09-26 S01 DCD_07.09-27
7. Digital communication independence from non-safety systems to the PSMS is achieved by communication processors of the PSMS that can mitigate all identifiable design-basis communication faults of the non-safety DCS.	7. Type tests or a combination of type tests and analysis of the communication processors of the PSMS will be performed to verify fault mitigation functions for each design-basis communication fault of the non-safety DCS.	7. A report exists and concludes that the communication processors of the PSMS can mitigate all identifiable design-basis communication faults of the non-safety DCS.	DCD_07.09-27

1. The functional arrangement of the ac electrical power systems is as described in the Design Description of Subsection 2.6.1.1 and as shown in Figure 2.6.1-1.

2. Independence is provided between each division of the four divisions of the Class 1E distribution equipment and circuits, and between Class 1E distribution equipment and circuits and non-Class 1E distribution equipment and circuits.

3. Independence between Class 1E electric power distribution equipment and non-Class 1E loads is provided by Class 1E qualified isolation devices.

4. Class 1E electric power distribution equipment of redundant divisions, identified in Table 2.6.1-1, is located in separate rooms in the reactor building.

5. Deleted.

6.a The seismic Category I Class 1E ac electrical power system equipment, identified in Table 2.6.1-1, can withstand seismic design basis loads without loss of safety function.

6.b If power through the RATs is not available, each Class 1E medium voltage bus is automatically transferred to the UATs, if available.

6.c If both offsite power sources are not available, each Class 1E medium voltage bus automatically connects to its respective EPS.

6.d If an open phase condition exists at the offsite power system, each Class 1E medium voltage bus is automatically transferred to its respective UAT. DCD_08.02-17 S01

7. For all plant trip conditions, except for a trip due to electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the GLBS opens.

8. For electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the MT circuit breaker at the switchyard opens.

9. Deleted. MIC-04-T1-00005

10. The UATs and RATs power sources are sized for worst case loading conditions for all modes of plant operation and accident conditions.

11.a The Class 1E distribution equipment and circuits are sized to carry the worst case load currents, to withstand the maximum fault currents, and to provide minimum design basis voltage at load terminals to support accomplishment of their safety functions.

11.b The Class 1E cables are sized considering derating due to ambient temperature and raceway loading.

12. The interrupting ratings of the Class 1E circuit breakers and fuses are adequate for maximum available fault currents.

13. The MT, UATs, and RATs have their own fire deluge system, oil pit and drain system.

Table 2.6.1-2 AC Electric Power Systems Equipment Displays and Control Functions

Equipment Name	MCR Display	MCR Control Function
A-Class 1E 6.9kV Switchgear	Yes	Yes (Breaker open/close)
B-Class 1E 6.9kV Switchgear	Yes	Yes (Breaker open/close)
C-Class 1E 6.9kV Switchgear	Yes	Yes (Breaker open/close)
D-Class 1E 6.9kV Switchgear	Yes	Yes (Breaker open/close)
A-RCP Trip Switchgear	Yes	Yes (Breaker open/close)
B-RCP Trip Switchgear	Yes	Yes (Breaker open/close)
C-RCP Trip Switchgear	Yes	Yes (Breaker open/close)
D-RCP Trip Switchgear	Yes	Yes (Breaker open/close)
A-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
A1-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
B-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
C-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
D-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
D1-Class 1E 480V Load Center	Yes	Yes (Breaker open/close)
A-Class 1E Motor Control Center	Yes	No
A1-Class 1E Motor Control Center	Yes	No
B-Class 1E Motor Control Center	Yes	No
C-Class 1E Motor Control Center	Yes	No
D-Class 1E Motor Control Center	Yes	No
D1-Class 1E Motor Control Center	Yes	No
Unit Auxiliary Transformers (UAT 1, 2, 3, 4)	Yes	No
Reserve Auxiliary Transformers (RAT 1, 2, 3, 4)	Yes	No

MIC-04-T1-00005

Table 2.6.1-3 AC Electric Power Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the ac electric power systems is as described in the Design Description of Subsection 2.6.1.1 and as shown in Figure 2.6.1-1.	1. Inspection of the as-built ac electric power systems will be performed.	1. The as-built ac electric power systems conform to the functional arrangement as described in the Design Description of Subsection 2.6.1.1 and as shown in Figure 2.6.1-1.
2. Independence is provided between each of the four divisions of the Class 1E distribution equipment and circuits, and between Class 1E distribution equipment and circuits and non-Class 1E distribution equipment and circuits.	2. Tests will be performed on the as-built Class 1E and non-Class 1E distribution equipment and circuits by providing a test signal in only one division at a time.	2. The test signal exists in the as-built Class 1E division or non-Class 1E division under test.
3. Independence between Class 1E electric power distribution equipment and non-Class 1E loads is provided by Class 1E qualified isolation devices.	3.i Type tests, analyses, or a combination of type test and analyses will be performed to verify the qualification of isolation devices.	3.i A report exists and concludes that the Class 1E electric power distribution equipment is isolated from the ~~as-built~~ non-Class 1E loads by the Class 1E qualified isolation devices so as to meet RG 1.75. MIC-04-T1-00005
	3.ii Inspection will be performed of the as-built Class 1E electric power distribution equipment.	3.ii Independence between the as-built Class 1E electric power distribution equipment and non-Class 1E loads is provided by Class 1E qualified isolation devices.
4. The Class 1E electric power distribution equipment of redundant divisions, identified in Table 2.6.1-1, is located in separate rooms in the reactor building.	4. Inspection of the as-built Class 1E electric power distribution equipment will be performed.	4. The as-built Class 1E electric power distribution equipment of redundant divisions, identified in Table 2.6.1-1, is located in the separate rooms in the reactor building.
5. Deleted.	5. Deleted.	5. Deleted.
6.a The seismic Category I Class 1E ac electrical power system equipment, identified in Table 2.6.1-1, can withstand seismic design basis loads without loss of safety function.	6.a.i Inspections will be performed to verify that the seismic Category I as-built Class 1E ac electrical power system equipment identified in Table 2.6.1-1, is located in a seismic Category I structure.	6.a.i The seismic Category I as-built Class 1E ac electric power system equipment, identified in Table 2.6.1-1, is located in a seismic Category I structure.

Table 2.6.1-3 AC Electric Power Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7. For all plant trip conditions, except for a trip due to electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the GLBS opens.	7. A test will be performed to verify that the as-built GLBS is opened by a simulated trip signal for each plant trip condition except for a trip due to electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits.	7. For all plant trip conditions, except for a trip due to electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the as-built GLBS opens.
8. For electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the MT circuit breaker at the switchyard opens.	8. A test will be performed to verify that the as-built MT circuit breaker trip signal is actuated by a simulated electrical fault trip signal for electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits.	8. For electrical fault in either MT, MG, GLBS, UATs, or associated equipment and circuits, the as-built MT circuit breaker at the switchyard opens.
9. Deleted.	9. Deleted.	9. Deleted.
10. The UATs and RATs power sources are sized for worst case loading conditions for all modes of plant operation and accident conditions.	10.i Analyses will be performed to verify the UATs and RATs power sources are sized for worst case loading conditions for all modes of plant operation and accident conditions.	10.i A report exists and concludes that the UATs and RATs power sources are sized for worst case loading conditions for all modes of plant operation and accident conditions.
	10.ii Inspections will be performed to verify that the ratings of as-built UATs and RATs power sources meet the size requirements determined by the analysis for worst case loading conditions for all modes of plant operation and accident conditions.	10.ii The ratings of as-built UATs and RATs power sources bound the size requirements determined by the analysis for worst case loading conditions for all modes of plant operation and accident conditions.

MIC-04-T1-0 0005

6. Each Class 1E battery charger has enough capacity to supply the normal dc loads of the associated 125V dc switchboard bus and charge the associated battery from the design minimum charge to 95% of its full capacity within twenty-four hours.

7. Alarms and displays identified in Subsection 2.6.2.1 are provided in the MCR.

8. Each redundant division of Class 1E battery is located in a separate room.

9. The Class 1E dc switchboard and battery charger of each division are located in separate rooms.

10. Deleted. MIC-04-T1-00005

11. The Class 1E dc power distribution system cables are sized to carry required load currents and to provide minimum design basis voltage at load terminals, considering derating due to ambient temperature and raceway loading.

12. The Class 1E dc system circuit breakers and fuses are sized to supply their load requirements.

13. The main circuit protection device in the switchboard of each of the four Class 1E dc power divisions has selective coordination with downstream protective devices.

14. The Class 1E dc power system operating voltage range at the terminals of the Class 1E equipment is within the equipment's voltage limit.

15. The equipment and circuits of each division of the Class 1E dc power system are uniquely identified.

16. The Class 1E dc power cables are routed in raceway systems for Class 1E dc power cables within their respective division.

17. The raceway systems for Class 1E dc power cables meet seismic Category I requirements.

2.6.2.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.6.2-2 describes the ITAAC for the dc power systems.

Table 2.6.2-2 DC Power Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4. Independence is provided between each of the four divisions of the Class 1E dc power system distribution equipment and circuits, and between Class 1E dc power system distribution equipment and circuits and non-Class 1E dc power system distribution equipment and circuits.	4. Tests will be performed on the as-built Class 1E and non-Class 1E dc power system distribution equipment and circuits by providing a test signal in only one division at a time.	4. The test signal exists in the as-built Class 1E division or non-Class 1E division under test.
5. Independence between Class 1E dc power system distribution equipment and non-Class 1E loads is provided by Class 1E qualified isolation devices.	5.i Type tests, analyses, or a combination of type tests and analyses will be performed to verify the qualification of isolation devices.	5.i A report exists and concludes that the Class 1E dc power system distribution equipment is isolated from the ~~as-built~~ non-Class 1E loads by Class 1E qualified isolation devices so as to meet RG 1.75. MIC-04-T1-00005
	5.ii Inspection will be performed of the as-built Class 1E dc power system distribution equipment.	5.ii Independence between the as-built Class 1E dc power system distribution equipment and non-Class 1E loads is provided by Class 1E qualified isolation devices.
6. Each Class 1E battery charger has enough capacity to supply the normal dc loads of the associated 125V dc switchboard bus and charge the associated battery from the design minimum charge to 95% of its full capacity within twenty-four hours.	6.i Analysis will be performed to verify each Class 1E battery charger has enough capacity to supply the normal dc loads of the associated 125V dc switchboard bus and charge the associated battery from the design minimum charge to 95% of its full capacity within twenty-four hours.	6.i A report exists and concludes that each Class 1E battery charger has enough capacity to supply the normal dc loads of the associated 125V dc switchboard bus and charge the associated battery from the design minimum charge to 95% of its full capacity within twenty-four hours.
	6.ii A test of each as-built Class 1E battery charger will be performed.	6.ii Each as-built Class 1E battery charger can supply greater than or equal to the analyzed load determined in 6.i.

Table 2.6.2-2 DC Power Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7. Alarms and displays identified in Subsection 2.6.2.1 are provided in the MCR.	7.i Inspection will be performed on the as-built A-VDU in the MCR for retrievability of alarms identified in Subsection 2.6.2.1.	7.i Alarms identified in Subsection 2.6.2.1 can be retrieved on the as-built A-VDU in the MCR.
	7.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Subsection 2.6.2.1	7.ii Displays identified in Subsection 2.6.2.1 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR.
8. Each redundant division of Class 1E battery is located in a separate room.	8. Inspection of each as-built Class 1E battery will be performed.	8. Each redundant division of as-built Class 1E battery is located in a separate room.
9. The Class 1E dc switchboard and battery charger of each division are located in separate rooms.	9. Inspection of the as-built Class 1E dc switchboard and battery charger will be performed.	9. The as-built Class 1E dc switchboard and battery charger of each division are located in separate rooms.
10. Deleted.	10. Deleted.	10. Deleted.
11. The Class 1E dc power distribution system cables are sized to carry required load currents and to provide minimum design basis voltage at load terminals considering derating due to ambient temperature and raceway loading.	11.i Analysis will be performed to verify the Class 1E dc power distribution system cables are sized to carry required load currents and to provide minimum design basis voltage at load terminals considering derating due to ambient temperature and raceway loading.	11.i A report exists and concludes that the Class 1E dc power distribution system cables are sized to carry required load currents and to provide minimum design basis voltage at load terminals considering derating due to ambient temperature and raceway loading.
	11.ii Inspection will be performed to verify the size of as-built Class 1E dc power distribution system cables installed bound the minimum size required by the analysis.	11.ii The as-built Class 1E dc power distribution system cables are sized to bound the minimum sizes determined by the analysis.

MIC-04-T1-00005

Table 2.6.3-3 I&C Power Supply Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9. When ac input power to the Class 1E UPS unit is lost, input to the Class 1E UPS unit is provided by the Class 1E battery without interruption of power supply to the loads.	9. A test will be performed to verify that when ac input power to the as-built Class 1E UPS unit is lost, input to the Class 1E UPS unit is provided by the Class 1E battery without interruption of power supply to the loads.	9. When ac input power to the as-built Class 1E UPS unit is lost, input to the Class 1E UPS unit is provided by the Class 1E battery without interruption of power supply to the loads.
10. Deleted.	10. Deleted.	10. Deleted. MIC-04-T1-00005
11. The Class 1E I&C power supply system circuit breakers and fuses are rated adequately to interrupt the fault currents.	11.i Analysis will be performed to verify the Class 1E I&C power supply system breakers and fuses are rated adequately to interrupt the fault currents.	11.i A report exists and concludes that the Class 1E I&C power supply system breakers and fuses are rated adequately to interrupt the fault currents.
	11.ii Inspection will be performed to verify the interrupting ratings of as-built Class 1E I&C power supply system breakers and fuses bound the requirements of the analysis.	11.ii The interrupting ratings of as-built Class 1E I&C power supply system breakers and fuses bound the requirements of the analysis.
12. The equipment and circuits of each Class 1E I&C power supply system division are uniquely identified.	12. Inspection of each as-built Class 1E I&C equipment and circuits of each Class 1E I&C power supply system division will be performed.	12. The equipment and circuits of each as-built Class 1E I&C power supply system division are uniquely identified.
13. The Class 1E I&C power supply system cables are routed in raceway systems for Class 1E I&C power supply cables within their respective division.	13. Inspection of the as-built Class 1E I&C power supply system cables routing will be performed.	13. The as-built Class 1E I&C power supply system cables are routed in raceway systems for Class 1E I&C power supply cables within their respective division.
14. Displays identified in Subsection 2.6.3.1 and Table 2.6.3-2 are provided in the MCR.	14. Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Subsection 2.6.3.1 and Table 2.6.3-2.	14. Displays identified in Subsection 2.6.3.1 and Table 2.6.3-2 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR.

Table 2.6.4-1 EPS Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 5 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
15.b After the closing of the Class 1E EPS circuit breaker, the LOOP sequencer sequentially starts the required safety-related loads.	15.b A test will be performed to verify operation of the LOOP sequencer after the closing of the as-built Class 1E EPS circuit breaker.	15.b After the closing of the as-built Class 1E EPS circuit breaker, the LOOP sequencer sequentially starts the required safety-related loads.
16. All Class 1E EPS protection systems, except for overspeed, generator differential current, and high exhaust gas temperature, are automatically bypassed when the Class 1E EPS is started by an ECCS actuation signal.	16. A test will be performed to verify that the as-built Class 1E EPS protection systems, except for overspeed, generator differential current, and high exhaust gas temperature, are automatically bypassed when the Class 1E EPS is started by an ECCS actuation signal.	16. The as-built Class 1E EPS protection systems, except for overspeed, generator differential current, and high exhaust gas temperature, are automatically bypassed when the Class 1E EPS is started by an ECCS actuation signal.
17. The Class 1E EPSs are capable of responding to an automatic start signal while in the test mode.	17. A test will be performed to verify that the as-built Class 1E EPSs are capable of responding to an automatic start signal while in the test mode.	17. The as-built Class 1E EPSs are capable of responding to an automatic start signal while in the test mode.
18. Controls are provided in the MCR and the Class 1E EPS room to start and stop each Class 1E EPS.	18.i Tests will be performed for control capability of each Class 1E EPS on the as-built S-VDU in the MCR.	18.i Controls on the as-built S-VDU in the MCR provide the necessary output from the PSMS to start and stop the respective Class 1E EPS.
	18.ii Tests will be performed on each as-built Class 1E EPS using the controls on the as-built O-VDU in the MCR and the Class 1E EPS room.	18.ii Controls on the as-built O-VDU in the MCR and the Class 1E EPS room start and stop each Class 1E EPS.
19. The functional arrangement of the Class 1E EPS support systems are as described in the Design Description of Subsection 2.6.4.2.	19. Inspection of the functional arrangement of the as-built Class 1E EPS support systems will be performed.	19. The as-built Class 1E EPS support systems conform to the functional arrangement as described in the Design Description of Subsection 2.6.4.2.
20. Deleted.	20. Deleted.	20. Deleted.

MIC-04-T1-0 0005

Table 2.6.4-1 EPS Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 9 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
28. Deleted.	28. Deleted.	28. Deleted.
29. Each fuel oil storage tank provides a seven day supply of fuel oil to its respective Class 1E EPS while operating at rated load.	29.i Analyses will be performed to determine the required fuel oil storage tank volume to provide a seven day supply of fuel oil to its respective Class 1E EPS while operating at rated load.	29.i A report exists and concludes that each fuel oil storage tank for the Class 1E EPS provides a seven day supply of fuel oil to its respective Class 1E EPS while operating at rated load.
	29.ii Inspection will be performed to verify that the capacity of the as-built fuel oil storage tank bounds the analyses.	29.ii The as-built fuel oil storage tank capacity bounds the analyses.
30. Each Class 1E EPS lubrication system lubricating oil tank provides a seven day supply of lubrication oil.	30.i Analyses will be performed to determine the Class 1E EPS lubrication system lubricating oil tank volume required to support seven days of Class 1E EPS operation based on the maximum expected lubricating oil consumption rate.	30.i A report exists and concludes that each Class 1E EPS lubrication system lubricating oil tank provides a seven day supply of lubrication oil based on the maximum expected lubricating oil consumption rate.
	30.ii Inspection will be performed to verify that the as-built Class 1E EPS lubrication system lubricating oil tank volume bounds the analyses.	30.ii The as-built Class 1E EPS lubrication system lubricating oil tank volume bounds the analyses.
31. Each main shaft driven lubrication oil pump circulates lubrication oil to the engine during EPS operation.	31. A test of each as-built main shaft driven lubrication oil pump will be performed.	31. Each as-built main shaft driven lubrication oil pump circulates lubrication oil to the engine during EPS operation.
32. Each division of the Class 1E EPS combustion air intake and exhaust system is capable of supplying combustion air to the EPS and of disposing exhaust gases of the EPS when operating at 110% of name plate rating.	32. A test of each division of the as-built Class 1E EPS at 110% of name plate rating will be performed.	32. Each division of the as-built Class 1E EPS combustion air intake and exhaust system is capable of supplying combustion air to the EPS and of disposing exhaust gases of the EPS when operating at 110% of name plate rating.

MIC-04-T1-0005

14. The two AAC power sources have a diverse starting system from the Class 1E EPSs. MIC-04-T1-00007

15. The AAC power source design is different than the Class 1E EPS design.

2.6.5.2 AAC Fuel Oil Storage and Transfer Systems (FOS) Design Description

Each AAC power source is provided with dedicated fuel oil supply system, fuel oil day tank and storage tank:

- The AAC FOSs are non safety-related.
- Each AAC fuel oil day tank is located inside the associated AAC power source room in the PS/B.

2.6.5.3 Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.6.5.1-1 describes the ITAAC for the AAC power source.

Table 2.6.5-1 AAC Systems Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 3)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	7.ii Inspection of each as-built AAC power source fuel oil storage tank will be performed to verify that the fuel capacity bounds the analyses.	7.ii Each as-built AAC power source fuel oil storage tank has fuel capacity that bounds the analyses.
8. Controls exist in the MCR to start, stop and synchronize the AAC power sources.	8. A test will be performed on the as-built AAC power sources using the controls on the as-built O-VDU in the MCR.	8. Controls on the as-built O-VDU in the MCR start, stop and synchronize the as-built AAC power sources.
9. Each AAC power source is capable of providing power at the set voltage and frequency to the non-Class 1E 6.9kV buses after receiving a start signal.	9. A test will be performed to verify that the as-built AAC power source can provide power at the set voltage and frequency to the non-Class 1E 6.9kV buses.	9. Each as-built AAC power source can provide power at the set voltage and frequency to the non-Class 1E 6.9kV buses after receiving a start signal.
10. Displays for each AAC power source status and the breaker status of each Class 1E 6.9kV breaker for the AAC power sources are provided in the MCR.	10. An inspection will be performed on the as-built VDU in the MCR for retrievability of the displays of each AAC power source status and the breaker status of each Class 1E 6.9kV breaker for the AAC power sources.	10. The displays of each AAC power source status and the breaker status of each Class 1E 6.9kV breaker for the AAC power sources can be retrieved on the as-built VDU in the MCR as below: AAC power source status: O-VDU Breaker status of Class 1E 6.9kV breaker for the AAC power sources: S-VDU and O-VDU.
11. The functional arrangement of the AAC fuel oil storage and transfer system is as described in the Design Description of Subsection 2.6.5.2.	11. Inspection of the functional arrangement of the as-built AAC fuel oil storage and transfer system will be performed.	11. The as-built AAC fuel oil storage and transfer system conforms to the functional arrangement as described in the Design Description of Subsection 2.6.5.2.
12. Deleted.	12. Deleted.	12. Deleted.

MIC-04-T1-00005

4.b The ASME Code Section III piping, identified in Table 2.7.1.2-3, retains its pressure boundary integrity at its design pressure.

5.a The seismic Category I equipment, identified in Table 2.7.1.2-2, can withstand seismic design basis loads without loss of safety function.

5.b The seismic Category I piping, including supports, identified in Table 2.7.1.2-3, can withstand seismic design basis loads without a loss of its safety function.

6.a The ~~Class 1E~~ equipment identified in Table 2.7.1.2-2 as being qualified for a harsh environment, including non-metallic parts of active mechanical equipment, can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. DCD_03.11-62

6.b Class 1E equipment, identified in Table 2.7.1.2-2, is powered from its respective Class 1E division.

6.c Separation is provided between redundant divisions of MSS Class 1E cables, and between Class 1E cables and non-Class 1E cables.

7. Deleted.

8.a Controls are provided in the MCR to open and close the remotely operated valves identified in Table 2.7.1.2-4.

8.b The remotely operated valves identified in Table 2.7.1.2-2 as having PSMS control perform an active safety function after receiving a signal from PSMS.

9.a The remotely operated and check valves identified in Table 2.7.1.2-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.

9.b Deleted. MIC-04-T1-00005

9.c Deleted.

9.d After loss of motive power, the remotely operated valves, identified in Table 2.7.1.2-2, assume the indicated loss of motive power position.

9.e Deleted. MIC-04-T1-00005

10. Alarms and displays identified in Table 2.7.1.2-4 are provided in the MCR.

11. Alarms, displays, and controls identified in Table 2.7.1.2-4 are provided in the RSC.

Table 2.7.1.2-2 Main Steam Supply System Equipment Characteristics (Sheet 2 of 2)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Main Steam Drain Line Isolation Valves	MSS-MOV-701A,B,C,D	2	Yes	Yes	Yes/Yes	Remote Manual	Transfer Closed	As Is
Main Steam Check Valves	MSS-VLV-516A,B,C,D	3	Yes	No	-/-Yes	-	Transfer Closed	-
Main Steam Line Pressure	MSS-PT-515, 516, 517, 518, 525, 526, 527, 528, 535, 536, 537, 538, 545, 546, 547, 548	-	Yes	-	Yes/No	-	-	-

DCD_03.11-62

DCD_03.11-62

Note:

1. Dash (-) indicates not applicable.

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.7.1.2-4 Main Steam Supply System Equipment Alarms, Displays, and Control Functions

MIC-04-T1-00005

Equipment/Instrument Name	MCR/RCS Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Main Steam Isolation Valves (MSS-SMV-515A, B, C, D)	No	Yes	Yes	Yes
Main Steam Bypass Isolation Valves (MSS-HCV-565, 575, 585, 595)	No	Yes	Yes	Yes
Main Steam Safety Valves (Position Indication) (MSS-SRV-509A,B,C,D MSS-SRV-510A,B,C,D MSS-SRV-511A,B,C,D MSS-SRV-512A,B,C,D MSS-SRV-513A,B,C,D MSS-SRV-514A,B,C,D)	No	Yes	No	Yes
Main Steam Relief Valves (MSS-PCV-515, 525, 535, 545)	No	Yes	Yes	Yes
Main Steam Depressurization Valves (MSS-MOV-508A. B, C, D)	No	Yes	Yes	Yes
Main Steam Relief Valve Block Valves (MSS-MOV-507A, B, C, D)	No	Yes	Yes	Yes
Main Steam Drain Line Isolation Valves (MSS-MOV-701A, B, C, D)	No	Yes	Yes	Yes
Main Steam Line Pressure (MSS-PT-515, 516, 517, 518, 525, 526, 527, 528, 535, 536, 537, 538, 545, 546, 547, 548)	Yes	Yes	No	Yes

Table 2.7.1.2-5 Main Steam Supply System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9.a The remotely operated and check valves identified in Table 2.7.1.2-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i Type tests or a combination of type tests and analyses of the remotely operated and check valves identified in Table 2.7.1.2-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i A report exists and concludes that each remotely operated and check valve identified in Table 2.7.1.2-2 as having an active safety function changes position as identified in Table 2.7.1.2-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.
	9.a.ii Tests of the as-built remotely operated and check valves identified in Table 2.7.1.2-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built remotely operated and check valve identified in Table 2.7.1.2-2 as having an active safety function changes position as identified in Table 2.7.1.2-2 under preoperational test conditions.
	9.a.iii Inspections will be performed of the as-built remotely operated and check valves identified in Table 2.7.1.2-2 as having an active safety function.	9.a.iii Each as-built remotely operated and check valve identified in Table 2.7.1.2-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
9.b Deleted.	9.b.i Deleted.	9.b.i Deleted.
	9.b.ii Deleted.	9.b.ii Deleted.
	9.b.iii Deleted.	9.b.iii Deleted.
9.c Deleted.	9.c Deleted.	9.c Deleted.
9.d After loss of motive power, the remotely operated valves, identified in Table 2.7.1.2-2, assume the indicated loss of motive power position.	9.d Tests of the as-built remotely operated valves identified in Table 2.7.1.2-2 will be performed under the conditions of loss of motive power.	9.d Upon loss of motive power, each as-built remotely operated valve identified in Table 2.7.1.2-2 assumes the indicated loss of motive power position.
9.e Deleted.	9.e.i Deleted.	9.e.i Deleted.
	9.e.ii Deleted.	9.e.ii Deleted.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.7.1.2-5 Main Steam Supply System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 7 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	9.e.iii Deleted.	9.e.iii Deleted.
10. Alarms and displays identified in Table 2.7.1.2-4 are provided in the MCR.	10.i Inspection will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Table 2.7.1.2-4.	10.i Alarms identified in Table 2.7.1.2-4 can be retrieved on the as-built A-VDU in the MCR.
	10.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.7.1.2-4.	10.ii Displays identified in Table 2.7.1.2-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR.
11. Alarms, displays, and controls identified in Table 2.7.1.2-4 are provided in the RSC.	11.i Inspection will be performed on the as-built O-VDU in the RSC for retrievability of the alarms identified in Table 2.7.1.2-4.	11.i Alarms identified in Table 2.7.1.2-4 can be retrieved on the as-built O-VDU in the RSC.
	11.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the RSC for retrievability of the displays identified in Table 2.7.1.2-4.	11.ii Displays identified in Table 2.7.1.2-4 can be retrieved on the as-built S-VDU and as-built O-VDU in the RSC.
	11.iii Tests will be performed for RSC control capability of the equipment, identified in Table 2.7.1.2-4, on the as-built S-VDU.	11.iii RSC controls for the equipment, identified in Table 2.7.1.2-4, on the as-built S-VDU provide the necessary output from the PSMS to operate the respective equipment.
	11.iv Tests will be performed on the as-built equipment, identified in Table 2.7.1.2-4, using controls on the as-built O-VDU in the RSC.	11.iv Controls on the as-built O-VDU in the RSC operate each as-built component identified in Table 2.7.1.2-4 with an RSC control function.

MIC-04-T1-0005

Table 2.7.1.2-5 Main Steam Supply System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12. The piping identified in Table 2.7.1.2-3 as designed for leak before break (LBB) meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	12. Inspections and analyses of the as-built piping identified in Table 2.7.1.2-3 will be performed.	12. For piping identified in Table 2.7.1.2-3 that meets the LBB criteria, an LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built piping identified in Table 2.7.1.2-3 including material and material specifications, pipe geometry, support location and their characteristics, location and weight of components such as valves. For piping identified in Table 2.7.1.2-3 as a candidate for LBB but does not meet LBB criteria, an as-designed pipe break hazard analysis report(s) exists and concludes that for each postulated piping failure: i. Piping stresses in the containment penetration area are within allowable stress limits,. ii. Pipe whip restraints and jet shield designs can mitigate pipe break loads,. iii. Loads on safety-related SSCs are within design load limits. iv. The safety related SSCs are protected against or are qualified to withstand the environmental effects of postulated failures.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.7.1.2-5 Main Steam Supply System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 9 of 10)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
13.a The MSSVs identified in Table 2.7.1.2-2 provide overpressure protection for the secondary side of the steam generators and for pressure boundary components in the MSS.	13.a.i Inspections of the MSSVs identified in Table 2.7.1.2-2 will be performed to confirm that the value of the ASME Code nameplate rating is greater than or equal to system relief requirements.	13.a.i The minimum capacity for each MSSV identified in Table 2.7.1.2-2 is greater than or equal to 884,000 lb/hr at design pressure.
	13.a.ii Tests in accordance with ASME Code Section III of the MSSVs identified in Table 2.7.1.2-2 will be performed to confirm set pressure.	13.a.ii The set pressure of MSSVs, identified in Table 2.7.1.2-2, meet the following criteria: First stage: 1185 psig ± 1% Second stage: 1215 psig ± 1% Third stage: 1244 psig ± 1%
13.b During design basis events, the MSS limits SG blowdown.	13.b.i Deleted.	13.b.i Deleted.
	13.b.ii Inspections will be performed on the area of the as-built flow restrictor within the SG main steam outlet nozzles.	13.b.ii The as-built flow restrictor within each SG main steam line outlet nozzle does not exceed 1.4 sq. ft.
14. The MSIVs and MSBIVs identified in Table 2.7.1.2-2 close within the required response time.	14. Tests will be performed using a simulated test signal to demonstrate that as-built MSIVs and MSBIVs identified in Table 2.7.1.2-2 close within the required response time under preoperational test conditions.	14. The as-built MSIVs and MSBIVs identified in Table 2.7.1.2-2 close within the following times after receiving a simulated signal under preoperational test conditions: MSIVs close within 5 seconds. MSBIVs close within 5 seconds.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.7.1.9-2 Condensate and Feedwater System Equipment Characteristics (Sheet 2 of 2)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Steam Generator Water Level (Narrow Range)	FWS-LT-510, 511, 512, 513, 520, 521, 522, 523, 530, 531, 532, 533, 540, 541, 542, 543,	-	Yes	-	Yes/ Yes	-	-	-
Steam Generator Water Level (Wide Range)	FWS-LT-514, 524, 534, 544	-	Yes	-	Yes/ Yes	-	-	-

DCD_03.11-62

Note:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.7.1.9-5 Condensate and Feedwater System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 7)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The functional arrangement of the CFS is as described in the Design Description of Subsection 2.7.1.9.1 and in Table 2.7.1.9-1 and as shown in Figure 2.7.1.9-1.	1.a Inspection of the as-built CFS will be performed.	1.a The as-built CFS conforms to the functional arrangement as described in the Design Description of Subsection 2.7.1.9.1 and in Table 2.7.1.9-1 and as shown in Figure 2.7.1.9-1.
1.b Each mechanical division of the CFS as shown in Figure 2.7.1.9-1 is physically separated from the other division so as not to preclude accomplishment of the safety function.	1.b Inspections and analysis of the as-built CFS will be performed.	1.b A report exists and concludes that each mechanical division of the as-built CFS as shown in Figure 2.7.1.9-1 is physically separated from other mechanical divisions of the system by spatial separation, barriers, or enclosures so as to assure that the functions of the safety-related system are maintained considering postulated dynamic effects (i.e., missile and pipe break hazard), internal flooding and fire.~~.~~
2.a.i The ASME Code Section III components of the CFS, identified in Table 2.7.1.9-2, are fabricated, installed and inspected in accordance with ASME Code Section III requirements.	2.a.i Inspection of the as-built ASME Code Section III components of the CFS identified in Table 2.7.1.9-2, will be performed.	2.a.i The ASME Code Section III data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III components of the CFS identified in Table 2.7.1.9-2 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.
2.a.ii The ASME Code Section III components of the CFS identified in Table 2.7.1.9-2 are reconciled with the design requirements.	2.a.ii A reconciliation analysis of the components identified in Table 2.7.1.9-2 using as-designed and as-built information and ASME Code Section III design report(s) (NCA-3550) will be performed.	2.a.ii The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that design reconciliation has been completed in accordance with the ASME Code, for the as-built ASME Code Section III components of the CFS identified in Table 2.7.1.9-2. The report documents the results of the reconciliation analysis.

MIC-04-T1-00005

Table 2.7.1.9-5 Condensate and Feedwater System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 7)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9.a The valves, identified in Table 2.7.1.9-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i Type tests or a combination of type tests and analyses of the valves identified in Table 2.7.1.9-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i A report exists and concludes that each valve identified in Table 2.7.1.9-2 as having an active safety function changes position as identified in Table 2.7.1.9-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.
	9.a.ii Tests of the as-built valves identified in Table 2.7.1.9-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built valve identified in Table 2.7.1.9-2 as having an active safety function changes position as identified in Table 2.7.1.9-2 under preoperational test conditions.
	9.a.iii Deleted.	9.a.iii Deleted.
	9.a.iv Inspections will be performed of the as-built valves identified in Table 2.7.1.9-2 as having an active safety function.	9.a.iv Each as-built valve identified in Table 2.7.1.9-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
9.b After loss of motive power, the remotely operated valves, identified in Table 2.7.1.9-2, assume the indicated loss of motive power position.	9.b Tests of the as-built remotely operated valves identified in Table 2.7.1.9-2 will be performed under the conditions of loss of motive power.	9.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.7.1.9-2 assumes the indicated loss of motive power position.
10. Alarms and displays identified in Table 2.7.1.9-4 are provided in the MCR.	10.i Inspection will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Table 2.7.1.9-4.	10.i Alarms identified in Table 2.7.1.9-4 can be retrieved on the as-built A-VDU in the MCR.
	10.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.7.1.9-4.	10.ii Displays identified in Table 2.7.1.9-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the MCR.

MIC-04-T1-00005

Table 2.7.1.11-2 Emergency Feedwater System Equipment Characteristics (Sheet 10 of 10)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
A, B-EFW pump turbine steam inlet drain line check valves	EFS-VLV-109A, B	3	Yes	No	-/-Yes	-	Transfer Open Transfer Closed	-
C, D-EFW pump turbine steam inlet drain line check valves	EFS-VLV-109C, D	3	Yes	No	-/-Yes	-	Transfer Open Transfer Closed	-
A, B-Emergency feedwater pits	MPT-001A, B	-	Yes	-	-/-	-	-	-

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Note:

1. Dash (-) indicates not applicable.

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.7.1.11-4 Emergency Feedwater System Equipment Alarms, Displays, and Control Functions

MIC-04-T1-00005

Equipment/Instrument Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Emergency feedwater pumps (EFS-MPP-001A, B, C, D)	No	Yes	Yes	Yes
Emergency feedwater control valves (EFS-MOV-017A, B, C, D)	No	Yes	Yes	Yes
Emergency feedwater isolation valves (EFS-MOV-019A, B, C, D)	No	Yes	Yes	Yes
Emergency feeedwater pump actuation valves (EFS-MOV-103A, B, C, D)	No	Yes	Yes	Yes
A-EFW pump main steam line steam isolation valves (EFS-MOV-101A, B)	No	Yes	Yes	Yes
D-EFW pump main steam line steam isolation valves (EFS-MOV-101C, D)	No	Yes	Yes	Yes
Emergency feedwater pit water level (EFS-LT-060, 061, 070, 071)	Yes	Yes	No	Yes
Emergency feedwater flow (EFS-FT-016, 026, 036, 046)	No	Yes	No	Yes
Emergency feedwater pump discharge pressure (EFS-PI-050, 051, 052, 053)	No	Yes	No	Yes

Table 2.7.1.11-5 Emergency Feedwater System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The functional arrangement of the EFWS is as described in the Design Description of Subsection 2.7.1.11.1 and in Table 2.7.1.11-1 and as shown in Figure 2.7.1.11-1.	1.a Inspection of the as-built EFWS system will be performed.	1.a The as-built EFWS conforms to the functional arrangement as described in the Design Description of Subsection 2.7.1.11.1 and in Table 2.7.1.11-1 and as shown in Figure 2.7.1.11-1.
1.b Each mechanical division of the EFWS as shown in Figure 2.7.1.11-1 is physically separated from the other divisions so as not to preclude accomplishment of the safety function.	1.b Inspection and analysis of as-built EFWS will be performed.	1.b A report exists and concludes that each mechanical division of the as-built EFWS as shown in Figure 2.7.1.11-1 is physically separated from other mechanical divisions of the system by spatial separation, barriers or enclosures so as to assure that the functions of the safety-related system are maintained considering postulated dynamic effects (i.e., missile and pipe break hazard), internal flooding and fire.
1.c Deleted.	1.c Deleted.	1.c Deleted.
1.d Deleted.	1.d Deleted.	1.d Deleted.
2.a.i The ASME Code Section III components of the EFWS, identified in Table 2.7.1.11-2, are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	2.a.i An inspection of the as-built ASME Code Section III components of the EFWS identified in Table2.7.1.11-2 will be performed.	2.a.i The ASME Code Section III data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III components of the EFWS identified in Table 2.7.1.11-2 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

MIC-04-T1-00005

Table 2.7.1.11-5 Emergency Feedwater System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
9.a The valves identified in Table 2.7.1.11-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i Type tests or a combination of type tests and analyses of the valves identified in Table 2.7.1.11-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i A report exists and concludes that each valve identified in Table 2.7.1.11-2 as having an active safety function changes position as indicated in Table 2.7.1.11-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.
	9.a.ii Tests of the as-built valves identified in Table 2.7.1.11-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built valve changes position as indicated in Table 2.7.1.11-2 as having an active safety function under preoperational test conditions.
	9.a.iii Inspections will be performed of the as-built valves identified in Table 2.7.1.11-2 as having an active safety function .	9.a.iii Each as-built valve identified in Table 2.7.1.11-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
	9.a.iv Deleted.	9.a.iv Deleted.
9.b After loss of motive power, the remotely operated valves, identified in Table 2.7.1.11-2, assume the indicated loss of motive power position.	9.b Tests of the as-built remotely operated valves identified in Table 2.7.1.11-2 will be performed under the conditions of loss of motive power.	9.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.7.1.11-2 assumes the indicated loss of motive power position.
10. Alarms and displays identified in Table 2.7.1.11-4 are provided in the MCR.	10.i Inspections will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Table 2.7.1.11-4.	10.i Alarms identified in Table 2.7.1.11-4 can be retrieved on the as-built A-VDU in the MCR.
	10.ii Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the MCR for retrievability of the displays identified in Table 2.7.1.11-4.	10.ii Displays identified in Table 2.7.1.11-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the RSC.

MIC-04-T1-0 0005

Table 2.7.1.11-5 Emergency Feedwater System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
14. The EFW pumps have sufficient net positive suction head (NPSH).	14. -Tests to measure the as-built EFW pump suction pressure will be performed. Inspections and analysis to determine NPSH available to each EFW pump will be performed. The analysis will consider vendor test results of required NPSH and the effect of: – pressure losses for pump inlet piping and components, – suction from the EFW pit water level at the minimum value.	14. A report exists and concludes that the NPSH available exceeds the required NPSH. MIC-04-T1-00005
15. The EFW control valves limit maximum flow to each SG to less than the EFW pump design value.	15. A test of each as-built EFW pump will be performed to determine system flow vs. SG pressure under preoperational condition. Analyses will be performed to convert the test results to the design conditions.	15. A report exists and concludes that the EFW control valve pre-set open position limits the EFW flow rate to the steam generator to equal to or less than 400 gpm with a SG pressure of 1221 psig .
16. Deleted.	16. Deleted.	16. Deleted.
17. The pumps identified in Table 2.7.1.11-2 as having PSMS control perform an active safety function after receiving a signal from PSMS.	17. Tests will be performed on the as-built pumps identified in Table 2.7.1.11-2 using simulated signals.	17. The as-built pumps identified in Table 2.7.1.11-2 as having PSMS control perform the active safety function identified in the table after receiving a simulated signal.
18. Controls are provided in the MCR to start and stop the EFW pumps identified in Table 2.7.1.11-4.	18.i Tests will be performed for MCR control capability of the EFW pumps, identified in Table 2.7.1.11-4, on the as-built S-VDU.	8.a.i MCR controls for the EFW pumps, identified in Table 2.7.1.11-4, on the as-built S-VDU provide the necessary output from the PSMS to start and stop the respective pumps.
	18.ii Tests will be performed on the as-built EFW pumps identified in Table 2.7.1.11-4 using controls on the as-built O-VDU in the MCR.	18.ii Controls on the as-built O-VDU in the MCR start and stop the as-built EFW pumps identified in Table 2.7.1.11-4 with the MCR control function.

Table 2.7.3.3-1 Component Cooling Water System Location of Equipment and Piping (Sheet 1 of 2)

System and Components	Location	
-Component cooling water heat exchangers	Reactor Building	MIC-04-T1-00005
-Component cooling water pumps	Reactor Building	
-Component cooling water surge tank	Reactor Building	
Component cooling water supply, return lines piping and valves excluding the following;: Component cooling water system containment isolation valves and piping between the valves Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058A and NCS-VLV-034A	Reactor Building	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves excluding the following;: Component cooling water system containment isolation valves and piping between the valves Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058B and NCS-VLV-034B	Reactor Building	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058A and NCS-VLV-034A, excluding the following;: Component cooling water system containment isolation valves and piping between the valves Component cooling water system piping and valves between and excluding the valve NCS-VLV-661A and NCS-VLV-669A Component cooling water system piping and valves between and excluding the valve NCS-VLV-601 and NCS-VLV-651	Reactor Building	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058B and NCS-VLV-034B, excluding the following;: Component cooling water system containment isolation valves and between the valves Component cooling water system piping and valves between and excluding the valve NCS-VLV-661B and NCS-VLV-669B	Reactor Building	MIC-04-T1-00005
-Component cooling water system piping and valves related to the excess letdown heat exchanger inside containment between and including the valves NCS-MOV-511,517, SRV-513	Containment Reactor Building	MIC-04-T1-00005
-Component cooling water system piping and valves related to the letdown heat exchanger inside containment between and including the valves NCS-MOV-531,537, SRV-533	Containment Reactor Building	MIC-04-T1-00005

Table 2.7.3.3-2 Component Cooling Water System Equipment Characteristics (Sheet 1 of 9)

MIC-04-T1-00005

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.[(2)]	PSMS Control	Active Safety Function	Loss of Motive Power Position
Component cooling water (CCW) heat exchangers	NCS-MHX-001 A, B, C, D	3	Yes	-	-/-	-	-	-
Component cooling water pumps	NCS-MPP-001 A, B, C, D	3	Yes	-	Yes/Yes	ECCS Actuation	Start	-
						LOOP sequence	Start	
						Low CCW header pressure	Start	
Component cooling water surge tanks	NCS-MTK-001 A, B	3	Yes	-	-/-	-	-	-
Component cooling water pump discharge check valves	NCS-VLV-016 A, B, C, D	3	Yes	-	-/-Yes	-	Transfer Open/ Transfer Closed	-
CCW supply header tie line isolation valves	NCS-MOV-020 A, B, C, D	3	Yes	Yes	Yes/Yes	Remote Manual	Transfer Open/ Transfer Closed	As Is

DCD_03.11-62

DCD_03.11-62

Table 2.7.3.3-2 Component Cooling Water System Equipment Characteristics (Sheet 9 of 9)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Containment fan cooler alternative cooling water return isolation valve	NCS-MOV-242	3	Yes	Yes	Yes/No	-	-	As Is
Nitrogen pressure control valves for CCW surge tanks	NCS-PCV-012, 022	3	Yes	Yes	-/-	-	-	Closed

DCD_03.11-62

NOTE:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62
DCD_03.11-62 S01

Table 2.7.3.3-3 Component Cooling Water System Piping Characteristics (Sheet 1 of 2)

Pipe Line Name	ASME Code Section III Class	Seismic Category I	
Component cooling water supply, return lines piping and valves excluding the following;: Component cooling water system containment isolation valves and piping between the valves Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058A and NCS-VLV-034A	3	Yes	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves excluding the following;: Component cooling water system containment isolation valves and piping between the valves Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058B and NCS-VLV-034B	3	Yes	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058A and NCS-VLV-034A, excluding the following;: Component cooling water system containment isolation valves and piping between the valves	-	No	MIC-04-T1-00005
Component cooling water supply, return lines piping and valves between and excluding the valves NCS-AOV-058B and NCS-VLV-034B, excluding the following;: Component cooling water system containment isolation valves and piping between the valves	-	No	MIC-04-T1-00005
Component cooling water system piping and valves related to the excess letdown heat exchanger inside containment between and including the valves NCS-MOV-511,517, SRV-513	2	Yes	
Component cooling water system piping and valves related to the letdown heat exchanger inside containment between and including the valves NCS-MOV-531,537, SRV-533	2	Yes	
Component cooling water system piping and valves between and including the containment isolation valves NCS-MOV-402A,436A,438A and NCS-VLV-403A,437A	2	Yes	

Table 2.7.3.5-1 Essential Chilled Water System Location of Equipment and Piping

System and Components	Location
Essential Chiller Unit	Power Source Building
Essential Chilled Water Pump	Power Source Building
Essential Chilled Water Compression Tank	Power Source Building
Essential chilled water distribution loop	Reactor Building Power Source Building
Essential chilled water piping from compression tank to and including the valves (VWS-VLV-252A,B,C,D, VWS-VLV-258A,B,C,D, VWS-SRV-253A,B,C,D, and VWS-VLV-254A,B,C,D~~,~~)	Power Source Building
Essential chilled water compression tank surge line piping	Power Source Building
Essential chilled water piping from distribution loop to and including the valves (VWS-VLV-271A,B,C,D and VWS-VLV-274A,B,C,D)	Power Source Building

MIC-04-T1-00005

Table 2.7.3.5-2 Essential Chilled Water System Equipment Characteristics (Sheet 3 of 3)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active safety Function	Loss of Motive Power Position
Penetration Area Air Handling Unit Chilled Water Control Valves	VWS-TCV-622, 632, 642, 652	3	Yes	Yes	Yes/Yes	Penetration Area High Temperature	Transfer Open	Open
Spent Fuel Pit Pump Area Air Handling Unit Chilled Water Control Valves	VWS-TCV-662A, 662B, 672A, 672B	3	Yes	Yes	Yes/Yes	Spent Fuel Pit Pump Area High Temperature	Transfer Open	Open
Essential chilled water pump discharge check valves	VWS-VLV-005 A, B, C, D	3	Yes	-	-/-No	-	Transfer Open	-
Compression tank relief valves	VWS-SRV-253 A, B, C, D	3	Yes	-	-/-No	-	Transfer Open	-
Nitrogen supply check valves	VWS-VLV-252 A, B, C, D	3	Yes	-	-/-No	-	Transfer Closed	-
Makeup water supply check valves	VWS-VLV-258 A, B, C, D	3	Yes	-	-/-No	-	Transfer Closed	-

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

NOTE:

1. Dash (-) indicates not applicable.

2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.7.3.5-5 Essential Chilled Water System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
12. Displays and controls identified in Table 2.7.3.5-4 are provided in the RSC.	12.i Inspection will be performed on the as-built S-VDU and the as-built O-VDU in the RSC for retrievability of the displays identified in Table 2.7.3.5-4.	12.i Displays identified in Table 2.7.3.5-4 can be retrieved on the as-built S-VDU and the as-built O-VDU in the RSC.
	12.ii Tests will be performed for RSC control capability of the equipment, identified in Table 2.7.3.5-4, on the as-built S-VDU.	12.ii RSC controls for the equipment, identified in Table 2.7.3.5-4, on the as-built S-VDU provide the necessary output from the PSMS to operate the respective equipment.
	12.iii Tests will be performed on the as-built equipment, identified in Table 2.7.3.5-4, using controls on the as-built O-VDU in the RSC.	12.iii Controls on the as-built O-VDU in the RSC operate each as-built component identified in Table 2.7.3.5-4 with an RSC control function.
13. The ECW pumps have sufficient net positive suction head (NPSH).	13. Tests to measure the as-built ECW pump suction pressure will be performed. Inspections and analysis to determine NPSH available to each pump will be performed. The analysis will consider vendor test results of required NPSH and the effects of: - pressure losses for pump inlet piping and components~~,~~ - suction from the ECWS compression tank with operating pressure and water level at their minimum value~~.~~	13. A report exists and concludes that the NPSH available exceeds the required NPSH.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.7.5.1-3 Main Control Room HVAC System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 6)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a The functional arrangement of the MCR HVAC system is as described in the Design Description of Subsection 2.7.5.1.1 and as shown in Figure 2.7.5.1-1.	1.a Inspection of the as-built MCR HVAC system will be performed.	1.a The as-built MCR HVAC system conforms to the functional arrangement as described in the Design Description of Subsection 2.7.5.1.1 and as shown in Figure 2.7.5.1-1.
1.b Each mechanical division of the MCR HVAC system as shown in Figure 2.7.5.1-1 is physically separated from the other divisions so as not to preclude accomplishment of the safety function.	1.b Inspections and analysis of the as-built MCRHVAC system will be performed.	1.b A report exists and concludes that each mechanical division of the as-built MCR HVAC system as shown in Figure 2.7.5.1-1 is physically separated from other mechanical divisions of the system by spatial separation, barriers or enclosures so as to assure that the functions of the safety-related system are maintained considering postulated dynamic effects (i.e., missile and pipe break hazard), internal flooding and fire. MIC-04-T1-00005
2. The seismic Category I equipment, identified in Table 2.7.5.1-1, can withstand seismic design basis loads without loss of safety function.	2.i Inspections will be performed to verify that the as-built seismic Category I equipment identified in Table 2.7.5.1-1 is located in a seismic Category I structure.	2.i The as-built seismic Category I equipment identified in Table 2.7.5.1-1 is located in a seismic Category I structure.
	2.ii Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment identified in Table 2.7.5.1-1 will be performed using analytical assumptions, or will be performed under conditions, which bound the seismic design basis requirements.	2.ii A report exists and concludes that the seismic Category I equipment identified in Table 2.7.5.1-1 can withstand seismic design basis loads without loss of safety function.
	2.iii Inspections and analyses will be performed to verify that the as-built seismic Category I equipment identified in Table 2.7.5.1-1 ,including anchorages, is seismically bounded by the tested or analyzed conditions.	2.iii A report exists and concludes that the as-built seismic Category I equipment identified in Table 2.7.5.1-1, including anchorages, is seismically bounded by the tested or analyzed conditions.

Table 2.7.5.2-1 Engineered Safety Features Ventilation System Equipment Characteristics (Sheet 4 of 10)

MIC-04-T1-00005

DCD_03.11-62

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Damper	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Safeguard Component Area HVAC System								
Safeguard Component Area Air Handling Units	VRS-MAH-301 A, B, C, D	—	Yes	—	—/-	—	None	—
Safeguard Component Area Air Handling Unit Fans	VRS-MFN-301 A, B, C, D	—	Yes	—	Yes/Yes	High Temperature	Start	—
Safeguard Component Area Air Handling Unit Cooling Coils	VRS-MCL-301 A, B, C, D	3	Yes	—	—/—	—	None	—
Safeguard Component Area Air Handling Unit Electric Heating Coils	VRS-MEH-301 A, B, C, D	—	Yes	—	Yes/Yes	Remote Manual	Energized	Deenergized
Safeguard Component Area Air Handling Unit Inlet Dampers	VRS-MOD-301 A, B, C, D	—	Yes	Yes	Yes/Yes	Fan Start	Transfer Open	As is
Safeguard Component Area Air Handling Unit Outlet Dampers	VRS-MOD-302 A, B, C, D	—	Yes	Yes	Yes/Yes	Fan Start	Transfer Open	As is
Backdraft Dampers	VRS-OTD-311 A, B, C, D	—	Yes	No	—/Yes	—	Transfer Open Transfer Closed	—
Ductwork	—	—	Yes	—	—/—	—	None	—
Safeguard Component Area Temperature	VRS-TS-305, 306, 307, 315, 316, 317, 325,326, 327, 335, 336, 337	—	Yes	—	Yes/Yes	—	—	—

DCD_03.11-62

Table 2.7.5.2-1 Engineered Safety Features Ventilation System Equipment Characteristics (Sheet 10 of 10)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Damper	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Essential Chiller Unit Area Temperature	VRS-TS-541, 544, 545, 551, 554, 555, 561, 564, 565, 571, 574, 575	—	Yes	—	Yes/No	—	—	—
Charging Pump Area Temperature	VRS-TS-581, 584, 585, 591, 594, 595	—	Yes	—	Yes/Yes	—	—	—
Annulus Emergency Exhaust Filtration Unit Area Temperature	VRS-TS-601, 604, 605, 611, 614, 615	—	Yes	—	Yes/Yes	—	—	—
Penetration Area Temperature	VRS-TS-621, 624, 625, 631, 634, 635, 641, 644, 645, 651, 654, 655	—	Yes	—	Yes/Yes	—	—	—
Spent Fuel Pit Pump Area Temperature	VRS-TS-661, 664, 665, 671, 674, 675	—	Yes	—	Yes/Yes	—	—	—

DCD_03.11-62

NOTE:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

MIC-04-T1-0 0005

Table 2.7.5.2-2 Engineered Safety Features Ventilation System Equipment Alarms, Displays and Control Functions (Sheet 1 of 3)

Equipment/Instrument Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Annulus Emergency Exhaust System				
Annulus Emergency Exhaust Filtration Unit Fans (VRS-MFN-001 A, B)	No	Yes	Yes	Yes
Penetration Area Exhaust Dampers (VRS-EHD-001 A, B)	No	Yes	No	Yes
Safeguard Component Area Exhaust Dampers (VRS-EHD-002 A, B)	No	Yes	No	Yes
Annulus Emergency Exhaust Filtration Unit Outlet Dampers (VRS-EHD-003 A, B)	No	Yes	No	Yes
Class 1E Electrical Room HVAC System				
Class 1E Electrical Room Air Handling Unit Fans (VRS-MFN-201 A, B, C, D)	No	Yes	Yes	Yes
Class 1E Electrical Room Return Air Fans (VRS-MFN-202 A, B, C, D)	No	Yes	Yes	Yes
Class 1E Battery Room Exhaust Fans (VRS-MFN-251 A, B, C, D)	No	Yes	Yes	Yes
Class 1E Electrical Room Outside Air Intake Isolation Dampers (VRS-EHD-201 A, B, C, D)	No	Yes	No	Yes
Class 1E Electrical Room Air Handling Unit Outlet Dampers (VRS-EHD-202 A, B, C, D)	No	Yes	No	Yes
Class 1E Electrical Room Return Air Fan Inlet Dampers (VRS-EHD-203 A, B, C, D)	No	Yes	No	Yes
Class 1E Electrical Room Air Handling Unit Inlet Dampers (VRS-EHD-204 A, B, C, D)	No	Yes	Yes	Yes
Class 1E Electrical Room Exhaust Line Isolation Dampers (VRS-AOD-205 A, B, C, D)	No	Yes	Yes	Yes
Class 1E Battery Room Exhaust Fan Inlet Dampers (VRS-EHD-251 A, B, C, D)	No	Yes	No	Yes

Table 2.7.5.2-2 Engineered Safety Features Ventilation System Equipment Alarms, Displays and Control Functions (Sheet 2 of 3)

MIC-04-T1-0 0005

Equipment/Instrument Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Class 1E Battery Room Exhaust Fan Outlet Dampers (VRS-EHD-252 A, B, C, D)	No	Yes	No	Yes
Class 1E Electrical Room Temperature (VRS-TCA-210, 230, 250, 270)	Yes	No	No	No
Safeguard Component Area HVAC System				
Safeguard Component Area Air Handling Unit Fans (VRS-MFN-301 A, B, C, D)	No	Yes	Yes	Yes
Safeguard Component Area Air Handling Unit Inlet Dampers (VRS-MOD-301 A, B, C, D)	No	Yes	No	Yes
Safeguard Component Area Air Handling Unit Outlet Dampers (VRS-MOD-302 A, B, C, D)	No	Yes	No	Yes
Safeguard Component Area Temperature (VRS-TCA-305, 315, 325, 335)	Yes	No	No	No
Emergency Feedwater Pump Area HVAC System				
Emergency Feedwater Pump Area Air Handling Unit Fans (VRS-MFN-401 A, B, C, D)	No	Yes	Yes	Yes
Emergency Feedwater Pump Area Temperature (VRS-TCA-401, 411, 421, 431)	Yes	No	No	No
Safety Related Component Area HVAC System				
Component Cooling Water Pump Area Air Handling Unit Fans (VRS-MFN-501 A, B, C, D)	No	Yes	Yes	Yes
Essential Chiller Unit Area Air Handling Unit Fans (VRS-MFN-511 A, B, C, D)	No	Yes	Yes	Yes
Charging Pump Area Air Handling Unit Fans (VRS-MFN-531 A, B)	No	Yes	Yes	Yes
Annulus Emergency Exhaust Filtration Unit Area Air Handling Unit Fans (VRS-MFN-541 A, B)	No	Yes	Yes	Yes
Penetration Area Air Handling Unit Fans (VRS-MFN-551 A, B, C, D)	No	Yes	Yes	Yes
Component Cooling Water Pump Area Temperature (VRS-TCA-501, 511, 521, 531)	Yes	No	No	No

Table 2.7.5.2-2 Engineered Safety Features Ventilation System Equipment Alarms, Displays and Control Functions (Sheet 3 of 3)

MIC-04-T1-00005

Equipment/Instrument Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Essential Chiller Unit Area Temperature (VRS-TCA-541, 551, 561, 571)	Yes	No	No	No
Charging Pump Area Temperature (VRS-TCA-581, 591)	Yes	No	No	No
Annulus Emergency Exhaust Filtration Unit Area Temperature (VRS-TCA-601, 611)	Yes	No	No	No
Penetration Area Temperature (VRS-TCA-621, 631, 641, 651)	Yes	No	No	No
Spent Fuel Pit Pump Area Temperature (VRS-TCA-661,671)	Yes	No	No	No

Table 2.7.5.2-3 Engineered Safety Features Ventilation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.f The safety-related component area HVAC system provides conditioned air to maintain area temperature within design limits in each individual safety-related component area, when the respective equipment is operating during abnormal and accident conditions of the plant.	4.f Tests and analyses of the as-built safety-related component area HVAC system will be performed for each safety-related component area.	4.f A report exists and concludes that each of the four divisions of the penetration area, CCW pump area and essential chiller unit area AHUs and the two divisions of the charging pump area, annulus emergency exhaust filtration unit area and spent fuel pit pump area AHUs in the as-built safety-related component area HVAC system, as shown in Figures 2.7.5.2-1 and 2.7.5.2-5, is capable of providing conditioned air to maintain area temperature within design limits in each individual safety-related component area, when the respective equipment is operating during abnormal and accident conditions of the plant.
5.a The remotely operated dampers, identified in Table 2.7.5.2-1 as having PSMS control, perform an active safety function after receiving a signal from PSMS.	5.a Tests will be performed on the as-built remotely operated dampers identified in Table 2.7.5.2-1 as having PSMS control using simulated signals.	5.a The as-built remotely operated dampers identified in Table 2.7.5.2-1 as having PSMS control perform the active safety function identified in the table after receiving a simulated signal.
5.b After loss of motive power, the remotely operated dampers, identified in Table 2.7.5.2-1, assume the indicated loss of motive power position.	5.b Tests of the as-built remotely operated dampers identified in Table 2.7.5.2-1 will be performed under the conditions of loss of motive power.	5.b Upon loss of motive power, each as-built remotely operated damper identified in Table 2.7.5.2-1 assumes the indicated loss of motive power position.
5.c The fire dampers in the ductwork of the ESFVS that penetrates the fire barriers that are required to protect safe shutdown capability close under design air flow conditions.	5.c Type tests, tests, a combination of type tests and analyses, or a combination of tests and analyses of the fire dampers will be performed under the design air flow conditions or conditions which bound the design air flow conditions.	5.c A report exists and concludes that the fire dampers in the ductwork of the ESFVS that penetrates the fire barriers that are required to protect safe shutdown capability close under the design air flow conditions or conditions which bound design air flow conditions.

MIC-04-T1-0 0005

MIC-04-T1-0 0005

Table 2.7.5.2-3 Engineered Safety Features Ventilation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 7 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
5.d Controls are provided in the MCR to open and close the remotely operated dampers identified in Table 2.7.5.2-2.	5.d.i Tests will be performed for MCR control capability of the remotely operated dampers, identified in Table 2.7.5.2-2, on the as-built S-VDU.	5.d.i MCR controls for the remotely operated dampers, identified in Table 2.7.5.2-2, on the as-built S-VDU provide the necessary output from the PSMS to open and close the respective dampers.	MIC-04-T1-00005
	5.d.ii Tests will be performed on the as-built remotely operated dampers identified in Table 2.7.5.2-2 using controls on the as-built O-VDU in the MCR.	5.d.ii Controls on the as-built O-VDU in the MCR open and close the as-built remotely operated dampers identified in Table 2.7.5.2-2 with the MCR control function.	MIC-04-T1-00005
5.e The remotely operated dampers, ~~and~~ tornado dampers and backdraft dampers, identified in Table 2.7.5.2-1, as having an active safety function perform an active safety function to change position as indicated in the table.	5.e.i Tests of the as-built remotely operated dampers and backdraft dampers identified in Table 2.7.5.2-1 as having an active safety function will be performed under preoperational flow and differential pressure test conditions.	5.e.i Each as-built remotely operated damper and backdraft damper changes position as identified in Table 2.7.5.2-1 as having an active safety function under preoperational test conditions.	DCD_03.11-62
	5.e.ii Type test or a combination of type test and analysis of the tornado dampers identified in Table 2.7.5.2-1 will be performed to verify that the dampers can perform their active safety function under design tornado conditions.	5.e.ii A report exists and concludes that the tornado dampers identified in Table 2.7.5.2-1 can perform their active safety function under design tornado conditions.	
	5.e.iii Inspection will be performed of the as-built tornado dampers identified in Table 2.7.5.2-1.	5.e.iii Each as-built tornado damper identified in Table 2.7.5.2-1 is bounded by the type test or combination of type test and analysis.	
	5.e.iv Tests will be performed of the as-built tornado dampers identified in Table 2.7.5.2-1 to verify freedom of motion.	5.e.iv Each as-built tornado damper identified in Table 2.7.5.2-1 has freedom of motion.	

Table 2.7.5.2-3 Engineered Safety Features Ventilation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 9)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6.a Controls are provided in the MCR to start and stop the ESFVS air handling units and filtration units identified in Table 2.7.5.2-2.	6.a.i Tests will be performed for MCR control capability of the ESFVS air handling units and filtration units, identified in Table 2.7.5.2-2, on the as-built S-VDU.	6.a.i MCR controls for the ESFVS air handling units and filtration units, identified in Table 2.7.5.2-2, on the as-built S-VDU provide the necessary output from the PSMS to start and stop the respective air handling units and filtration units. MIC-04-T1-00005
	6.a.ii Tests will be performed on the as-built air handling units and filtration units identified in Table 2.7.5.2-2 using controls on the as-built O-VDU in the MCR.	6.a.ii Controls on the as-built O-VDU in the MCR start and stop the as-built air handling units and filtration units identified in Table 2.7.5.2-2 with the MCR control function. MIC-04-T1-00005
6.b The annulus emergency exhaust filtration unit fans identified in Table 2.7.5.2-1 start and the isolation dampers identified in Table 2.7.5.4-1 perform an active safety function to close upon receipt of an ECCS actuation signal.	6.b Tests of the as-built annulus emergency exhaust filtration unit fans identified in Table 2.7.5.2-1 and isolation damper identified in Table 2.7.5.4-1 will be performed using a simulated signal.	6.b The as-built annulus emergency exhaust filtration unit fans identified in Table 2.7.5.2-1 start and each of the as-built isolation dampers identified in Table 2.7.5.4-1 close upon receipt of a simulated ECCS actuation signal.
6.c The Class 1E electrical room HVAC system air handling unit fans identified in Table 2.7.5.2-1 start after receiving an ECCS actuation signal.	6.c Tests of the as-built Class 1E electrical room HVAC system air handling unit fans identified in Table 2.7.5.2-1 will be performed using a simulated signal.	6.c The as-built Class 1E electrical room HVAC system air handling unit fans identified in Table 2.7.5.2-1 start after receiving a simulated ECCS actuation signal.
6.d The safeguard component area HVAC system, emergency feedwater pump area HVAC system, and the safety related component area HVAC system air handling unit fans identified in Table 2.7.5.2-1 start after receiving a high temperature signal.	6.d Tests of the as-built safeguard component area HVAC system, emergency feedwater pump area HVAC system, and the safety related component area HVAC system air handling unit fans identified in Table 2.7.5.2-1 will be performed using a simulated signal.	6.d The as-built safeguard component area HVAC system, emergency feedwater pump area HVAC system, and the safety related component area HVAC system air handling unit fans identified in Table 2.7.5.2-1 start after receiving a simulated high temperature signal.

Table 2.7.5.4-2 Auxiliary Building Ventilation System Equipment Alarms, Displays and Control Functions

MIC-04-T1-0 0005

Equipment/Instrument Name	MCR/RSC Alarm	MCR Display	MCR/RSC Control Function	RSC Display
Penetration Area Supply Line Isolation Dampers (VAS-AOD-501 A, B, 502 A, B)	No	Yes	Yes	Yes
Penetration Area Exhaust Line Isolation Dampers (VAS-AOD-503 A, B, 504 A, B)	No	Yes	Yes	Yes
Safeguard Component Area Supply Line Isolation Dampers (VAS-AOD-505 A, B, C, D, 506 A, B, C, D)	No	Yes	Yes	Yes
Safeguard Component Area Exhaust Line Isolation Dampers (VAS-AOD-507 A, B, C, D, 508 A, B, C, D)	No	Yes	Yes	Yes
Auxiliary Building HVAC system Exhaust Line Isolation Dampers (VAS-AOD-511, 512)	No	Yes	Yes	Yes

Table 2.7.6.3-1 Spent Fuel Pit Cooling and Purification System Equipment Characteristics (Sheet 1 of 2)

MIC-04-T1-00005
DCD_03.11-62

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Spent fuel pit pumps	SFS-MPP-001A,B	3	Yes	–	Yes/Yes	Remote Manual	Start	–
						Low-low SFP water level	Stop	–
Spent fuel pit heat exchangers	SFS-MHX-001A,B	3	Yes	–	—/—	—/—	—	–
Spent fuel pit	SFS-MPT-001	—	Yes	—	—/—	—	—	–
Spent fuel pump discharge check valves	SFS-VLV-006A,B	3	Yes	—	—/~~—~~Yes	—	Transfer Open/ Transfer Close	–
Cooling-Purification lines isolation valves	SFS-MOV-001A,B; SFS-MOV-002A,B	3	Yes	Yes	Yes/No	Low-Low SFP water level	Transfer Close	As is
RWS supply line control valve	SFS-MOV-028	3	Yes	Yes	Yes/Yes	Remote Manual	Transfer Open	As is
RWS supply line isolation valve	SFS-MOV-029	3	Yes	Yes	Yes/Yes	Remote Manual	Transfer Open	As is
Spent fuel pit level	SFS-LT-010, 020, 030, 040	—	Yes	—	Yes/Yes	—	—	—
Spent fuel pit temperature	SFS-TE-010, 020	—	Yes	—	Yes/Yes	—	—	—

DCD_03.11-62

Table 2.7.6.3-1 Spent Fuel Pit Cooling and Purification System Equipment Characteristics (Sheet 2 of 2)

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Spent fuel pit pump discharge flow	SFS-FT-032, 042	—	Yes	—	Yes/Yes	—	—	—
Refueling water recirculation pumps	RWS-MPP-001A,B	3	Yes	—	Yes/Yes	Remote Manual	Start	—
Refueling water recirculation pump discharge check valves	RWS-VLV-012A,B	3	Yes	—	—/—Yes	—	Transfer Open	—
Spent fuel pit purification subsystem outlet check valves	SFS-VLV-036A,B	3	Yes	—	—/Yes	—	Transfer Close	—

MIC-04-T1-00005
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62

Note:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62
DCD_03.11-62 S01

Table 2.7.6.3-2 Spent Fuel Pit Cooling and Purification System Piping Characteristics

Pipe Line Name	ASME Code Section III Class	Seismic Category I
SFP cooling piping up to and including the following valves: Purification line isolation valves: SFS-MOV-002A,B and SFS-VLV-133A,B	3	Yes
Safety-related SFP make up line from RWSP	3	Yes
Connection piping to and from RHRS	3	Yes
Water transfer line to transfer canal, cask pit, fuel inspection pit.	3	Yes
Refueling water return piping from containment isolation valve RWS-VLV-023 (excluding) and RWS-VLV-045 and refueling water storage pit	2	Yes
Refueling water pump suction piping from refueling water storage pit to RWS-VLV-041 and containment isolation valves RWS-MOV-002 (excluding) and RWS-VLV-003 (excluding)	2	Yes

Table 2.7.6.3-3 Spent Fuel Pit Cooling and Purification System Equipment Alarms, Displays and Control Functions

MIC-04-T1-0 0005

Equipment/Instrument Name	MCR/RSC Display	MCR Display	MCR/RSC Control Function	RCS Display
SFP pumps (SFS-MPP-001A, B)	No	Yes	Yes	Yes
SFP level (SFS-LT-010, 020, 030, 040)	Yes	Yes	No	Yes
SFP temperature (SFS-TE-010, 020)	Yes	Yes	No	Yes
SFP pump discharge flow (SFS-FT-032, 042)	Yes	Yes	No	Yes
Refueling water recirculation pumps (RWS-MPP-001A,B)	No	Yes	Yes	Yes

Table 2.7.6.3-4 Spent Fuel Pit Cooling and Purification System Location of Equipment and Piping

MIC-04-T1-0 0005

System and Components	Location
Spent fuel pit	Reactor Building
Spent fuel pit pumps	Reactor Building
Spent fuel pit heat exchangers	Reactor Building
SFP cooling piping up to and including the following valves : Purification line isolation valves: SFS-MOV-002A,B and SFS-VLV-133A,B	Reactor Building
Safety related SFP make up line from RWSP including following valves: SFS-MOV-028 and SFS-MOV-029	Reactor Building
Connection piping to and from RHRS	Reactor Building
Water transfer line to transfer canal, cask pit, fuel inspection pit.	Reactor Building
Refueling water return piping from containment isolation valve RWS-VLV-023 (excluding) and RWS-VLV-045 and refueling water storage pit	Containment
Refueling water pump suction piping from refueling water storage pit to RWS-VLV-041 and containment isolation valves RWS-MOV-002 (excluding) and RWS-VLV-003 (excluding)	Containment

2.7.6.4 Light Load Handling System (LLHS)

2.7.6.4.1 Design Description

The light load handling system (LLHS) is located in the containment vessel and the fuel storage and handling area of the reactor building. It consists of mechanical and electrical equipment and building structural features related to refueling operations. The LLHS equipment includes the refueling machine, the fuel handling machine, the new fuel elevator, the suspension hoist on the spent fuel cask handling crane, the fuel transfer tube, and the fuel transfer tube blind flange. The LLHS has interlock actuation annunciation lamps to visually prompt the operator with the interlock status. Additionally, movement of the fuel handling machine and refueling machine bridge is audibly signaled. All of the LLHS, except the safety-related fuel transfer tube, blind flange, and permanent cavity seal, is non-safety related.

1. The functional arrangement of the LLHS is as described in the Design Description of Subsection 2.7.6.4.1.

2.a The seismic Category I equipment identified in Table 2.7.6.4-1 can withstand seismic design basis loads without the loss of safety function.

2.b The seismic Category II LLHS equipment identified in Table 2.7.6.4-1 will not impair the ability of seismic Category I SSC to perform its design basis safety function during or following an SSE.

3. The refueling machine utilizes electrical interlocks, limit switches, and mechanical stops to:

   a) prevent damage to a fuel assembly due to inadvertent operation of the gripper controls, MIC-04-T1-00005

   b) assure appropriate radiation shielding depth below the water level for fuel assemblies handled in the refueling cavity, and

   c) monitor the fuel assembly load for imparted loads greater than the nominal weight of the fuel assembly.

4. The suspension hoist of the spent fuel cask handling crane is precluded from lifting a load greater than its rated capacity by a load limit interlock.

5. The new fuel elevator winch has a load sensing device which prevents a fuel assembly from being raised.

6. The fuel handling machine utilizes electrical interlocks, limit switches, and mechanical stops to:

   a) prevent damage to a fuel assembly due to inadvertent operation of the gripper controls, MIC-04-T1-00005

Table 2.7.6.4-2 Light Load Handling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
3. The refueling machine utilizes electrical interlocks, limit switches, and mechanical stops to: a) prevent damage to a fuel assembly due to inadvertent operation of the gripper controls, b) assure appropriate radiation shielding depth below the water level for fuel assemblies handled in the refueling cavity, and c) monitor the fuel assembly load for imparted loads greater than the nominal weight of the fuel assembly.	3.a A test of the as-built refueling machine will be performed by operating the open controls of the gripper while suspending a dummy fuel assembly.	3.a The gripper of the as-built refueling machine does not open while suspending a dummy fuel assembly.
	3.b.i An analysis will be performed to determine the preset position of the limit switch to stop lifting of spent fuel to maintain shielding depth of water above a spent fuel assembly being handled in the refueling cavity.	3.b.i A report exists and concludes that the preset position of the limit switch maintains a shielding depth of water of 11’ -1” or greater, above a spent fuel assembly being handled in the refueling cavity.
	3.b.ii A test will be performed to verify that the as-built refueling machine stops lifting a dummy fuel assembly at the preset position.	3.b.ii The as-built refueling machine stops lifting the dummy fuel assembly at the preset position determined by the analysis.
	3.c A Test of the as-built refueling machine will be performed by attempting to lift a dummy fuel assembly that is heavier than the nominal fuel assembly.	3.c The as-built refueling machine is precluded from lifting the load of a dummy fuel assembly that is heavier than the nominal weight of the fuel assembly due to the function of electrical interlocks.
4. The suspension hoist of the spent fuel cask handling crane is precluded from lifting a load greater than its rated capacity by a load limit interlock.	4. Test of the as-built spent fuel cask handling crane suspension hoist’s load limit interlock will be performed.	4. The as-built spent fuel cask handling crane suspension hoist is precluded from lifting a load greater than its rated capacity of 2 metric tons.
5. The new fuel elevator winch has a load sensing device which prevents a fuel assembly from being raised.	5. Test of the as-built load sensing device on the new fuel elevator will be performed.	5. The as-built new fuel elevator winch has a load sensing device which prevents a fuel assembly from being raised.

MIC-04-T1-0
0005

Table 2.7.6.4-2 Light Load Handling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
6. The fuel handling machine utilizes electrical interlocks, limit switches, and mechanical stops to: a) prevent damage to a fuel assembly due to inadvertent operation of the gripper controls, b) assure appropriate radiation shielding depth below the water level for fuel assemblies handled in the spent fuel pit, and c) monitor the fuel assembly load for imparted loads greater than the nominal weight of the fuel assembly.	6.a A Test of the as-built fuel handling machine will be performed by operating the open controls of the gripper while suspending a dummy fuel assembly.	6.a The gripper of the as-built fuel handling machine does not open while suspending the dummy fuel assembly.
	6.b.i An analysis will be performed to determine the preset position of the limit switch to stop lifting of spent fuel to maintain shielding depth of water above a spent fuel assembly being handled in the spent fuel pit.	6.b.i A report exists and concludes that the preset position of the limit switch maintains a shielding depth of water of 11’ -1” or greater, above a spent fuel assembly being handled in the spent fuel pit.
	6.b.ii A test will be performed to verify that the as-built fuel handling machine stops lifting a dummy fuel assembly at the preset position.	6.b.ii The as-built fuel handling machine stops lifting the dummy fuel assembly at the preset position determined by the analysis.
	6.c A test of the as-built fuel handling machine will be performed by attempting to lift a dummy assembly that is heavier than the nominal fuel assembly.	6.c The as-built fuel handling machine is precluded from lifting the load of a dummy fuel assembly that is heavier than the nominal weight of the fuel assembly due to the function of electrical interlocks.
7. Deleted.	7. Deleted.	7. Deleted.

MIC-04-T1-0 0005

Table 2.7.6.5-1 Overhead Heavy Load Handling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c.i The PCCV polar crane main and auxiliary hoists meet requirements of single-failure-proof cranes.	2.c.i A combination of inspection, tests and analyses will be performed on the as-built polar crane main and auxiliary hoists to verify they are single-failure-proof. The PCCV polar crane main and auxiliary hoists: 1. reeving system design precludes a load drop in the event of a single rope failure. 2. are equipped with at least two holding brakes. 3. will be tested at a minimum of 100% of rated load in accordance with ASME NOG-1 Full-Load Test. 4. will be tested at a minimum of 125% of rated load in accordance with ASME NOG-1 Rated Load Test. 5. will be no-load tested to include verification of limit switch, interlock and stop settings. 6. critical welds will be subject to non-destructive examination (NDE) in accordance with ASME NOG-1.	2.c.i A report exists and concludes that the as-built PCCV polar crane main and auxiliary hoists are single-failure-proof. The as-built PCCV polar crane main and auxiliary hoists: 1. can tolerate a single reeving system rope failure without load drop. 2. are equipped with two holding brakes, each of which are set and rated at a minimum torque of 125 % of rated hoisting torque at the point of brake application. 3. can hold and operate with a load of at least 100% of rated load. 4. can lift, transport, lower, stop and hold a test load of at least 125% of rated load. Each polar crane hoist holding brake is capable of stopping and holding a minimum of 125% rated load. 5. limit switches, interlocks and stops are set in accordance with design requirements. 6. critical welds meet ASME NOG-1 criteria for NDE.

MIC-04-T1-0 0005

Table 2.7.6.5-1 Overhead Heavy Load Handling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.c.ii The spent fuel cask handling crane main hoist meets requirements of single-failure-proof cranes.	2.c.ii A combination of inspection, tests and analyses will be performed on the as-built spent fuel cask handling crane main hoist to verify it is single-failure-proof. The spent fuel cask handling crane main hoist: 1. reeving system design precludes a load drop in the event of a single rope failure. 2. is equipped with at least two holding brakes. 3. will be tested at a minimum of 100% of rated load in accordance with ASME NOG-1 Full-Load Test. 4. will be tested at a minimum of 125% of rated load in accordance with ASME NOG-1 Rated Load Test. 5. will be no-load tested to include verification of limit switch, interlock and stop settings. 6. critical welds will be subject to non-destructive examination (NDE) in accordance with ASME NOG-1.	2.c.ii A report exists and concludes that the as-built spent fuel cask handling crane main hoist is single-failure-proof. The as-built spent fuel cask handling crane main hoist: 1. can tolerate a single reeving system rope failure without load drop. 2. is equipped with two holding brakes, each of which are set and rated at a minimum torque of 125 % of rated hoisting torque at the point of brake application. 3. can hold and operate with a load of at least 100% of rated load. 4. can lift, transport, lower, stop and hold a test load of at least 125% of rated load. The main hoist holding brake is capable of stopping and holding a minimum of 125% rated load. 5. limit switches, interlocks and stops are set in accordance with design requirements. 6. critical welds meet ASME NOG-1 criteria for NDE.

MIC-04-T1-00005

Table 2.7.6.6-1 Process Effluent Radiation Monitoring and Sampling System Equipment Characteristics (Sheet 1 of 2)

MIC-04-T1-0 0005

PERMS Monitor Name	Detector Number	Safety Related	Seismic Category I	Class 1E/ Qual. for Harsh Envir.	Location
Containment Radiation Gas	RMS-RE-041	No	No	No/No	R/B
Containment Radiation Particulate	RMS-RE-040	No	No	No/No	R/B
Containment Low Volume Purge Radiation Gas	RMS-RE-023	No	No	No/No	R/B
Containment Exhaust Radiation Gas	RMS-RE-022	No	No	No/No	R/B
High Sensitivity Main Steam Line (N-16ch.)	RMS-RE-065A,B, 066A,B, 067A,B, 068A,B	No	No	No/No	R/B
Main Steam Line	RMS-RE-087, 088, 089, 090	No	No	No/No	R/B
Gaseous Radwaste Discharge	RMS-RE-072	No	No	No/No	A/B
Main Control Room Outside Air Intake Gas Radiation	RMS-RE-084A,B	Yes	Yes	Yes/No	R/B
Main Control Room Outside Air Intake Iodine Radiation	RMS-RE-085A,B	Yes	Yes	Yes/No	R/B
Main Control Room Outside Air Intake Particu-late Radiation	RMS-RE-083A,B	Yes	Yes	Yes/No	R/B
TSC Outside Air Intake Gas Radiation	RMS-RE-101	No	No	No/No	A/B
TSC Outside Air Intake Iodine Radiation	RMS-RE-102	No	No	No/No	A/B
TSC Outside Air Intake Particulate Radiation	RMS-RE-100	No	No	No/No	A/B
CCW Radiation	RMS-RE-056A,B	No	No	No/No	R/B
Auxiliary Steam Condensate Water Radiation	RMS-RE-057	No	No	No/No	A/B
Primary Coolant Radiation	RMS-RE-070	No	No	No/No	R/B
Turbine Building Floor Drain Radiation	RMS-RE-058	No	No	No/No	T/B
SG Blowdown Water Radiation	RMS-RE-055	No	No	No/No	R/B
SG Blowdown Return Water Radiation	RMS-RE-036	No	No	No/No	A/B
Plant Vent Radiation Gas (Normal Range)	RMS-RE-021A,B	No	No	No/No	R/B
Plant Vent Extended Radiation Gas (Accident Mid Range)	RMS-RE-080A	No	No	No/No	R/B
Plant Vent Extended Radiation Gas (Accident High Range)	RMS-RE-080B	No	No	No/No	R/B
Condenser vacuum pump exhaust line radiation (Normal Range)	RMS-RE-043A,B	No	No	No/No	T/B

Table 2.7.6.6-1 Process Effluent Radiation Monitoring and Sampling System Equipment Characteristics (Sheet 2 of 2)

MIC-04-T1-0 0005

PERMS Monitor Name	Detector Number	Safety Related	Seismic Category I	Class 1E/ Qual. for Harsh Envir.	Location
Condenser vacuum pump exhaust line radiation (Accident Mid Range)	RMS-RE-081A	No	No	No/No	T/B
Condenser vacuum pump exhaust line radiation (Accident High Range)	RMS-RE-081B	No	No	No/No	T/B
GSS exhaust fan discharge line radiation (Normal Range)	RMS-RE-044A,B	No	No	No/No	T/B
GSS exhaust fan discharge line radiation (Accident Mid Range)	RMS-RE-082A	No	No	No/No	T/B
GSS exhaust fan discharge line radiation (Accident High Range)	RMS-RE-082B	No	No	No/No	T/B
Liquid Radwaste Discharge	RMS-RE-035	No	No	No/No	A/B
ESW Radiation	RMS-RE-074A,B,C ,D	No	No	No/No	R/B

Table 2.7.6.7-1 Process and Post-accident Sampling System Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Isolation valves on RHR down stream of containment spray and residual heat removal heat exchanger	PSS-MOV-052A,B,C,D	2	Yes	Yes	Yes / Yes	Remote Manual	Transfer Closed	As Is
Containment isolation valves inside CV on sample from RCS Hot Leg	PSS-MOV-013,023	2	Yes	Yes	Yes/Yes	Containment Isolation Phase A	Transfer Closed	As Is
Containment isolation valves outside containment on sample from RCS Hot Leg	PSS-MOV-031A,B	2	Yes	Yes	Yes/ Yes	Containment Isolation Phase A	Transfer Closed	As Is
Containment isolation valve outside CV on post-accident liquid sample return to containment sump	PSS-MOV-071	2	Yes	Yes	Yes/ Yes	Remote Manual	Transfer Closed	As Is
Containment isolation valve inside CV on post-accident liquid sample return to containment sump	PSS-VLV-072	2	Yes	No	— / ~~—~~Yes	—	Transfer Closed	—
Containment isolation valve inside CV on gas sample from Pressurizer	PSS-AOV-003	2	Yes	Yes	Yes/Yes	Containment Isolation Phase A	Transfer Closed	Closed
Containment isolation valve inside CV on liquid sample from Pressurizer	PSS-MOV-006	2	Yes	Yes	Yes/Yes	Containment Isolation Phase A	Transfer Closed	As Is
Containment isolation valves inside CV on sample from Accumulator	PSS-AOV-062A,B,C,D	2	Yes	Yes	Yes /Yes	Containment Isolation Phase A	Transfer Closed	Closed
Containment isolation valve outside CV on sample from Accumulator	PSS-AOV-063	2	Yes	Yes	Yes /Yes	Containment Isolation Phase A	Transfer Closed	Closed

DCD_03.11-62

DCD_03.11-62

Note:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62
DCD_03.11-62 S01

Table 2.7.6.7-5 Process and Post-accident Sampling System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.b The ASME Code Section III piping, identified in Table 2.7.6.7-3, retains its pressure boundary integrity at its design pressure.	4.b A hydrostatic test will be performed on the as-built piping, identified in Table 2.7.6.7-3, required by the ASME Code Section III to be hydrostatically tested.	4.b ASME Code Data Report(s) exist and conclude that the results of the hydrostatic tests of the as-built piping identified in Table 2.7.6.7-3 as ASME Code Section III conform to the requirements of the ASME Code Section III.
5.a The seismic Category I equipment identified in Table 2.7.6.7-1 can withstand seismic design basis loads without loss of safety function.	5.a.i Inspections will be performed to verify that the as-built seismic Category I equipment identified in Table 2.7.6.7-1 is located in a seismic Category I structure.	5.a.i The as-built seismic Category I equipment identified in Table 2.7.6.7-1 is located in a seismic Category I structure(s).
	5.a.ii Type tests, analyses, or a combination of type tests and analyses of the seismic Category I equipment identified in Table 2.7.6.7-1 will be performed using analytical assumptions, or will be performed under conditions, which bound the seismic design basis requirements.	5.a.ii A report exists and concludes that the seismic Category I equipment identified in Table 2.7.6.7-1 can withstand seismic design basis loads without loss of safety function.
	5.a.iii Inspections and analyses will be performed to verify that the as-built seismic Category I equipment identified in Table 2.7.6.7-1, including anchorages, is seismically bounded by the tested or analyzed conditions.	5.a.iii A report exists and concludes that the as-built seismic Category I equipment identified in Table 2.7.6.7-1, - including anchorages, is seismically bounded by the tested or analyzed conditions.

MIC-04-T1-0 0005

Table 2.7.6.8-1 Equipment and Floor Drainage Systems Inspections, Tests, Analyses and Acceptance Criteria (Sheet 1 of 2)

MIC-04-T1-0 0005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the equipment and floor drainage systems is as described in the Design Description of Subsection 2.7.6.8.1, and as shown in Figure 2.7.6.8-1.	1. Inspection of the as-built equipment and floor drainage systems will be performed.	1. The as-built equipment and floor drainage systems conform to the functional arrangement as described in the Design Description of Subsection 2.7.6.8.1, and as shown in Figure 2.7.6.8-1.
2. Alarms identified in Subsection 2.7.6.8.1 are provided in the MCR.	2. Inspection will be performed on the as-built A-VDU in the MCR for retrievability of the alarms identified in Subsection 2.7.6.8.1.	2. Alarms identified in Subsection 2.7.6.8.1 can be retrieved on the as-built A-VDU in the MCR.
3. Flow from the T/B sump is isolated when the T/B sump discharge radiation monitor setpoint is reached.	3. A test will be performed on the as-built T/B sump discharge valve using a simulated signal.	3. Upon receipt of a simulated T/B sump discharge radiation monitor isolation signal, the as-built T/B sump discharge valve closes.
4. The seismic Category I drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 can withstand seismic design basis loads without loss of safety function.	4.a Inspections will be performed to verify that the as-built seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1 are located in a seismic Category I structure.	4.a The as-built seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1 are located in a seismic Category I structure.
	4.b Type tests, analyses, or a combination of type tests and analyses of the seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1 will be performed using analytical assumptions, or will be performed under conditions which bound the seismic design basis requirements.	4.b A report exists and concludes that the seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1 can withstand seismic design basis loads without loss of safety function.
	4.c Inspections and analyses will be performed to verify that the as-built seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1, including anchorages, are seismically bounded by the tested or analyzed conditions.	4.c A report exists and concludes that the as-built seismic Category I ESF equipment rooms drain isolation valves identified in Figure 2.7.6.8-1, including anchorages, are seismically bounded by the tested or analyzed conditions.

Table 2.7.6.8-1 Equipment and Floor Drainage Systems Inspections, Tests, Analyses and Acceptance Criteria (Sheet 2 of 2)

MIC-04-T1-0 0005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5.a Deleted.	5.a Deleted.	5.a Deleted.
5.b Deleted.	5.b Deleted.	5.b Deleted.
6.a The ASME Code Section III drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	6.a Inspection of the as-built ASME Code Section III drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 will be performed.	6.a The ASME Code Section III data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.
6.b The ASME Code Section III drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 are reconciled with the design requirements.	6.b A reconciliation analysis of the drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 using as-designed and as-built information and ASME Code Section III design report(s) (NCA-3550) will be performed.	6.b The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that design reconciliation has been completed in accordance with the ASME Code, for the as-built ASME Code Section III drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1. The report documents the results of the reconciliation analysis.
7. The drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 retain water leak tightness.	7. A static leak test will be performed on the as-built floor drainage piping from the ESF equipment rooms, including as-built drain isolation valves, identified in Figure 2.7.6.8-1.	7. During a static leak test, no leakage is visually observed through the as-built drain isolation valves from the ESF equipment rooms identified in Figure 2.7.6.8-1 when the drain valves are in the closed position.

2.7.6.9 Fire Protection System (FPS)

2.7.6.9.1 Design Description

The fire protection system (FPS) detects and locates fires and provides the capability to extinguish or control the fire using fixed automatic and manual suppression systems, manual hose streams, and/or portable fire fighting equipment. Water is provided to hose stations for manual fire fighting in areas containing safe shutdown equipment following a safe shutdown earthquake. The FPS also supports the containment isolation function for piping penetrating the containment as described in Subsection 2.11.2. The FPS is classified as a non safety-related, non-seismic system with the exception of the containment isolation function.

The FPS consists of a number of fire detection and suppression subsystems including:

- Detection systems for early detection and notification of a fire occurrence. Fire detection systems are provided where required by the fire hazard analysis (FHA).
- A water supply system including the fire pumps, adequate fire water supply source, yard main, and interior distribution piping.
- Fixed automatic and manual fire suppression systems and equipment, including hydrants, standpipes, hose stations and portable fire extinguishers. Manual fire suppression capability is provided in areas of the plant containing safety-related equipment, including areas that have an automatic suppression system.

1. The functional arrangement of the FPS is as described in the Design Description of Subsection 2.7.6.9.1.

2. Individual fire detectors provide fire detection capability and initiate fire alarms in areas containing safety-related equipment.

3. There are two 100 percent capacity fire pumps: one pump is motor driven and one pump is diesel driven.

4.a Under safe-shutdown earthquake loading, the standpipe system remains functional in areas containing equipment required for safe-shutdown.

4.b Deleted. MIC-04-T1-0 0005

5. Deleted.

6.a The FPS fire water supply is available as an alternative component cooling water source for severe accident prevention.

6.b The FPS fire water supply is available to the containment spray system and water injection to the reactor cavity for severe accident mitigation.

7. Deleted.

Table 2.7.6.9-2 Fire Protection System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 2)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The functional arrangement of the FPS is as described in the Design Description of Subsection 2.7.6.9.1.	1. Inspections of the as-built FPS will be performed.	1. The as-built FPS conforms to the functional arrangement as described in the Design Description of Subsection 2.7.6.9.1.
2. Individual fire detectors provide fire detection capability and initiate fire alarms in areas containing safety-related equipment.	2.i Tests will be performed on the as-built individual fire detectors in areas containing safety-related equipment using a simulated signal.	2.i The as-built individual fire detectors initiate fire alarms in areas containing safety-related equipment.
	2.ii An inspection will be performed to verify that as-built fire detectors are installed in areas containing safety-related equipment.	2.ii The as-built fire detectors are installed in areas containing safety-related equipment.
3. There are two 100 percent capacity fire pumps: one pump is motor driven and one pump is diesel driven.	3.i An analysis will be performed to determine the 100 percent design flow rate for each fire pump.	3.i A report exists and concludes that each fire pump can provide the design flow rate to satisfy the demand of any automatic sprinkler system plus 500 gpm for fire hoses.
	3.ii Tests will be performed to confirm that the as-built fire pumps can provide the 100 percent design flow rate.	3.ii The as-built fire pumps are capable of achieving their 100 percent design flow rate.
	3.iii An inspection of the two as-built fire pumps will be performed.	3.iii The type and capacity of two as-built fire pumps are consistent with the design requirements of each pump, such that one pump is motor driven with 100% capacity and the other pump is diesel driven with 100% capacity.
4.a Under safe-shutdown earthquake loading, the standpipe system remains functional in areas containing equipment required for safe shutdown.	4.a Inspection and analysis will be performed of the as-built standpipe system as documented in a seismic design report.	4.a The seismic design report exists and concludes that the as-built standpipe system remains functional in areas containing equipment required for safe shutdown under safe-shutdown earthquake loading.
4.b Deleted.	4.b Deleted.	4.b Deleted.
5. Deleted.	5. Deleted.	5. Deleted.

MIC-04-T1-0 0005

Table 2.7.6.13-1 Area Radiation Monitoring System Equipment Characteristics

MIC-04-T1-0
0005

ARMS Monitor Name	Detector Number	Safety Related	Seismic Category I	Class 1E/ Qual. for Harsh Envir.	Location
MCR Area Radiation	RMS-RE-001	No	No	No/No	R/B
Containment Air Lock Area Radiation	RMS-RE-002	No	No	No/No	C/V
Radio Chemical Lab. Area Radiation	RMS-RE-003	No	No	No/No	AC/B
SFP Area Radiation	RMS-RE-005	No	No	No/No	R/B
Nuclear Sampling Room Area Radiation	RMS-RE-006	No	No	No/No	AC/B
ICIS Area Radiation	RMS-RE-007	No	No	No/No	C/V
Waste management system Area Radiation	RMS-RE-008	No	No	No/No	A/B
TSC Area Radiation	RMS-RE-009	No	No	No/No	AC/B
Containment High Range Area Radiation	RMS-RE-091A,B, 092A,B, 093A,B, 094A,B	Yes	Yes	Yes/Yes	C/V

Table 2.7.6.13-2 Airborne Radioactivity Monitoring System Equipment Characteristics

MIC-04-T1-0
0005

Radiation Gas Monitor Name	Detector Number	Safety Related	Seismic Category I	Class 1E/ Qual for Harsh Envir.	Location
Fuel Handling Area HVAC Radiation Gas	RMS-RE-049	No	No	No/No	A/B
Annulus and Safeguard Area HVAC Radiation Gas	RMS-RE-046	No	No	No/No	R/B
Reactor Building HVAC Radiation Gas	RMS-RE-048A	No	No	No/No	A/B
Auxiliary Building HVAC Radiation Gas	RMS-RE-048B	No	No	No/No	A/B
Sample and Lab Area HVAC Radiation Gas	RMS-RE-048C	No	No	No/No	A/B

Table 2.11.1-2 Containment Vessel Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 2)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a Deleted.	1.a Deleted.	1.a Deleted.
1.b The PCCV liner is fabricated, installed, and inspected in accordance with ASME Code, Section III requirements.	1.b Inspection of the as-built PCCV liner will be performed.	1.b The ASME Code, Section III data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built PCCV liner was fabricated, installed, and inspected in accordance with ASME Code, Section III requirements.
1.c The PCCV liner welds meet ASME Code, Section III requirements for non-destructive examination of welds.	1.c Inspections of the as-built PCCV liner welds will be performed in accordance with ASME Code, Section III.	1.c The ASME Code, Section III code reports exist and conclude that the ASME Code, Section III requirements are met for non-destructive examination of the as-built PCCV liner welds.
2. Deleted.	2. Deleted.	2. Deleted.
3. The physical arrangement of the PCCV is as described in the Design Description of Subsection 2.11.1.1 and as shown in Figure 2.11.1-1.	3. Inspections of the as built PCCV will be performed.	3. The as-built PCCV conforms to the physical arrangement as described in the Design Description of Subsection 2.11.1.1 and as shown in Figure 2.11.1-1 with the following dimensional tolerances: D1, R1: +6.0/-6.0 inches H1, H2, H3: +3.0/-3.0 inches H4: +6.0/-6.0 inches t1, t2, t3: +3.0/-3.0 inches
4. A set of drain paths from the SG compartments to the reactor cavity exists.	4. Inspections of the as-built drain paths from the as-built SG compartments to the as-built reactor cavity as shown in Figure 2.4.4-1 will be performed.	4. Eight floor openings to provide drain paths from the as-built SG compartments to the reactor cavity through the header compartment as shown in Figure 2.4.4-1 exist.
5. The reactor cavity includes a core debris trap as shown in Figure 2.2-10.	5. An inspection of the as-built reactor cavity will be performed.	5. The as-built reactor cavity includes a core debris trap as shown in Figure 2.2-10.

MIC-04-T1-00005

Table 2.11.2-1 Containment Isolation System Equipment Characteristics (Sheet 10 of 10)

System Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	Safety-Related Display	PSMS Control	Active Safety Function	Loss of Motive Power Position
PSS	PSS-MOV-013,023	Refer to Table 2.7.6.7-1 and 2.7.6.7-4							
PSS	PSS-MOV-031A,B								
PSS	PSS-MOV-071								
PSS	PSS-VLV-072								
PSS	PSS-AOV-003								
PSS	PSS-MOV-006								
PSS	PSS-AOV-062A,B,C,D								
PSS	PSS-AOV-063								
CSS	CSS-MOV-001 A, B, C, D	Refer to Table 2.11.3-2 and 2.11.3-4							
CSS	CSS-MOV-004 A, B, C, D								
CSS	CSS-VLV-005 A, B, C, D								

DCD_03.11-62

NOTE:
1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B.

DCD_03.11-62

DCD_03.11-62 S01

Table 2.11.2-2 Containment Isolation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 13)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
2.b.ii The ASME Code Section III piping of the CIS, including supports, identified on Figure 2.11.2-1, is reconciled with the design requirements.	2.b.ii A reconciliation analysis of the piping of the CIS, including supports, identified on Figure 2.11.2-1, using as-designed and as-built information and ASME Code Section III design report(s) (NCA3550) will be performed.	2.b.ii The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that design reconciliation has been completed in accordance with the ASME Code, for the as-built ASME Code Section III piping of the CIS, including supports, identified on Figure 2.11.2-1. The report documents the results of the reconciliation analysis.
3.a Pressure boundary welds in ASME Code Section III components, identified in Table 2.11.2-1, meet ASME Code Section III requirements for non-destructive examination of welds.	3.a Inspections of the as-built pressure boundary welds in ASME Code Section III components identified in Table 2.11.2-1, will be performed in accordance with the ASME Code Section III.	3.a The ASME Code Section III code reports exist and conclude that the ASME Code Section III requirements are met for non-destructive examination of as-built pressure boundary welds in ASME Code Section III components identified in Table 2.11.2-1.
3.b Pressure boundary welds in ASME Code Section III piping, identified on Figure 2.11.2-1, meet ASME Code Section III requirements for non-destructive examination of welds.	3.b Inspections of the as-built pressure boundary welds in ASME Code Section III piping, identified on Figure 2.11.2-1, will be performed in accordance with the ASME Code Section III.	3.b The ASME Code Section III code reports exist and conclude that the ASME Code Section III requirements are met for non-destructive examination of as-built pressure boundary welds in ASME Code Section III piping identified on Figure 2.11.2-1.
4.a The ASME Code Section III components, identified in Table 2.11.2-1, retain their pressure boundary integrity at their design pressure.	4.a A hydrostatic test will be performed on the as-built components, identified in Table 2.11.2-1, required by the ASME Code Section III to be hydrostatically tested.	4.a ASME Code Data Report(s) exist and conclude that the results of the hydrostatic test of the as-built components identified in Table 2.11.2-1 as ASME Code Section III conform to the requirements of the ASME Code Section III.

Table 2.11.2-2 Containment Isolation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 8 of 13)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	8.xi Tests will be performed to verify as-built CVCS CIVs close within the isolation response times.	8.xi The following as-built CVCS CIVs close within the required times: ≤ 15 seconds CVS-MOV-203 CVS-MOV-204 ≤ 20 seconds CVS-AOV-005 CVS-AOV-006 CVS-MOV-152
	8.xii Tests will be performed to verify as-built FWS CIVs close within the isolation response times.	8.xii The following as-built FWS CIVs close within the required times: ≤ 5 seconds FWS-SMV-512 A,B,C,D ≤ 15 seconds EFS-MOV-019 A,B,C,D
	8.xiii Tests will be performed to verify as-built SGBDS CIVs close within the isolation response times.	8.xiii The following as-built SGBDS CIVs close within the required times: ≤ 15 seconds SGS-AOV-031 A,B,C,D ≤ 20 seconds SGS-AOV-001 A,B,C,D
	8.xiv Tests will be performed to verify as-built CCWS CIVs close within the isolation response times.	8.xiv The following as-built CCWS CIVs close within the required times: ≤ 20 seconds NCS-MOV-511 NCS-MOV-517 ≤ 40 seconds NCS-MOV-402 A,B NCS-MOV-436 A,B NCS-MOV-438 A,B NCS-MOV-531 NCS-MOV-537

Table 2.11.2-2 Containment Isolation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 11 of 13)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	12.c Inspections will be performed of the as-built valves identified in Table 2.11.2-1 as having an active safety function.	12.c Each as-built valve identified in Table 2.11.2-1 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
	12.d Deleted.	12.d Deleted.
13. After loss of motive power, the remotely operated valves, identified in Table 2.11.2-1, assume the indicated loss of motive power position.	13. Tests of the as-built remotely operated valves identified in Table 2.11.2-1 will be performed under the conditions of loss of motive power.	13. Upon loss of motive power, each as-built remotely operated valve identified in Table 2.11.2-1 assumes the indicated loss of motive power position.
14. Containment penetrations are capable of automatically isolating on their respective PSMS control signals during an SBO event with alternate ac power sources unavailable.	14. Tests of the as-built valves will be performed to verify the valves are capable of automatically isolating on their respective PSMS control signals during the conditions of an SBO event with alternate ac power sources unavailable.	14. Each of the following as-built valves automatically isolate on their respective PSMS control signals identified in Table 2.11.2-1 during the conditions of an SBO event with alternate ac power sources unavailable: CVS-MOV-203, 204 LMS-AOV-104, 105 CAS-MOV-002 VCS-AOV-306, 307, 356, 357

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.11.2-2 Containment Isolation System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 12 of 13)

MIC-04-T1-00005

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
15. Remotely operated CIVs located inside and outside the containment in series on the same penetration are powered from different Class 1E divisions.	15. Tests of the remotely operated CIVs located inside and outside the containment in series on the same penetration will be performed.	15. The following CIVs located inside and outside the containment in series on the same penetration are powered from different Class 1E divisions.	
		Inside Containment	Outside Containment
		RCS-AOV-147	RCS-AOV-148
		CVS-AOV-005	CVS-AOV-006
		CVS-MOV-203	CVS-MOV-204
		NCS-MOV-436A	NCS-MOV-438A
		NCS-MOV-436B	NCS-MOV-438B
		LMS-AOV-052	LMS-AOV-053
		LMS-AOV-055	LMS-AOV-056 LMS-AOV-060
		LMS-LCV-010A	LMS-LCV-010B
		LMS-AOV-104	LMS-AOV-105
		PSS-AOV-003 PSS-MOV-006 PSS-MOV-013	PSS-MOV-031A
		PSS-MOV-023	PSS-MOV-031B
		PSS-AOV-062A PSS-AOV-062B PSS-AOV-062C PSS-AOV-062D	PSS-AOV-063
		RWS-MOV-002	RWS-MOV-004
		VCS-AOV-306	VCS-AOV-307
		VCS-AOV-305	VCS-AOV-304
		VCS-AOV-356	VCS-AOV-357
		VCS-AOV-355	VCS-AOV-354
		VWS-MOV-422	VWS-MOV-407
		RMS-MOV-001	RMS-MOV-002
		IGS-AOV-002	IGS-AOV-001

Table 2.11.3-2 Containment Spray System Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/ Qual. For Harsh Envir.(2)	PSMS Control	Active Safety Function	Loss of Motive Power Position
Containment Spray Nozzles	-	2	Yes	-	-/-	-	-	-
CS/RHR Pump RWSP Suction Isolation Valves	CSS-MOV-001 A, B, C, D	2	Yes	Yes	Yes/ Yes	Remote Manual	Transfer Closed	As Is
Containment Spray Header Containment Isolation Valves	CSS-MOV-004A, B, C, D	2	Yes	Yes	Yes/Yes	Containment Spray Actuation	Transfer Open	As Is
						Remote Manual with CS/RHR Valve Open Block Interlock	Transfer Closed	
Containment Spray Header Containment Isolation Check Valves	CSS-VLV-005A, B, C, D	2	Yes	-	-/-Yes	-	Transfer Open/ Transfer Closed	-
Containment Spray Header Fire Water Supply Line Stop Valve	CSS-MOV-011	2	Yes	Yes	Yes/~~Yes~~No	-	-	As Is
Containment Pressure	CSS-PT-010, 011, 012, 013	-	Yes	-	Yes/Yes	-	-	-
Containment Pressure	CSS-PT-014 (instrument line)	-	Yes	-	-/-	-	-	-
Containment Temperature	CSS-TE-020	-	Yes	-	Yes/Yes	-	-	-

DCD_03.11-62 (header row; CSS-VLV-005 row; CSS-MOV-011 row; NOTE)

NOTE:

1. Dash (-) indicates not applicable.
2. Non-metallic parts having no failure modes under the specified environmental and service conditions that affect the safety function of the active mechanical equipment are excluded from qualification for harsh environment as described in ASME QME-1, Appendix QR-B. DCD_03.11-62 S01

Table 2.11.3-5 Containment Spray System Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 6 of 8)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
8. Controls are provided in the MCR to open and close the remotely operated valves identified in Table 2.11.3-4.	8.i Tests will be performed for MCR control capability of the remotely operated valves, identified in Table 2.11.3-4, on the as-built S-VDU.	8.i MCR controls for the remotely operated valves, identified in Table 2.11.3-4, on the as-built S-VDU provide the necessary output from the PSMS to open and close the respective valves.
	8.ii Tests will be performed on the as-built remotely operated valves identified in Table 2.11.3-4 using controls on the as-built O-VDU in the MCR.	8.ii Controls on the as-built O-VDU in the MCR open and close the as-built remotely operated valves identified in Table 2.11.3-4 with the MCR control function.
9.a The valves identified in Table 2.11.3-2 as having an active safety function can perform an active safety function to change position as indicated in the table under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i Type tests or a combination of type tests and analyses of the valves identified in Table 2.11.3-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.	9.a.i A report exists and concludes that each valve identified in Table 2.11.3-2 as having an active safety function changes position as indicated in Table 2.11.3-2 under expected ranges of fluid flow, differential pressure, electrical conditions, and temperature conditions up to and including design-basis conditions.
	9.a.ii Tests of the as-built valves identified in Table 2.11.3-2 as having an active safety function will be performed under preoperational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built valve identified in Table 2.11.3-2 as having an active safety function changes position as indicated in Table 2.11.3-2 under preoperational test conditions.
	9.a.iii Inspections will be performed of the as-built valves identified in Table 2.11.3-2 as having an active safety function.	9.a.iii Each as-built valve identified in Table 2.11.3-2 as having an active safety function is bounded by the type tests, or a combination of type tests and analyses.
	9.a.iv Deleted.	9.a.iv Deleted.
9.b After loss of motive power, the remotely operated valves, identified in Table 2.11.3-2, assume the indicated loss of motive power position.	9.b. Tests of the as-built valves identified in Table 2.11.3-2 will be performed under the conditions of loss of motive power.	9.b Upon loss of motive power, each as-built remotely operated valve identified in Table 2.11.3-2 assumes the indicated loss of motive power position.

MIC-04-T1-0 0005

Table 2.12-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 1 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1.a Vital equipment is located only within a vital area.	1.a Inspections will be performed of vital equipment locations.	1.a Vital equipment is located only within a vital area.
1.b Reserved.	1.b Reserved.	1.b Reserved.
2.a Reserved.	2.a Reserved.	2.a Reserved.
2.b Reserved.	2.b Reserved.	2.b Reserved.
2.c Reserved.	2.c Reserved.	2.c Reserved.
3.a Reserved.	3.a Reserved.	3.a Reserved.
3.b Reserved.	3.b Reserved.	3.b Reserved.
3.c Reserved.	3.c Reserved.	3.c Reserved.
4.a Reserved.	4.a Reserved.	4.a Reserved.
4.b Reserved.	4.b Reserved.	4.b Reserved.
4.c Reserved.	4.c Reserved.	4.c Reserved.
5. Reserved.	5. Reserved.	5. Reserved.
6.a The external walls, doors, ceilings and floors in the main control room and the central alarm station are bullet resistant.	6.a Type test, analysis or a combination of type test and analysis of the external walls, doors, ceilings, floors in the main control room and the central alarm station will be performed.	6.a A report exists and concludes that the external walls, doors, ceilings, floors in the main control room and the central alarm station are bullet resistant to at least Underwriters Laboratories Ballistic Standard 752, Level 4, or National Institute of Justice Standard 0108.01, Type III.
6.b Reserved.	6.b Reserved.	6.b Reserved.
7. Reserved.	7. Reserved.	7. Reserved.
8.a Reserved.	8.a Reserved.	8.a Reserved.
8.b Reserved.	8.b Reserved.	8.b Reserved.
9. Reserved.	9. Reserved.	9. Reserved.

MIC-04-T1-00005

Table 2.12-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
10.a Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the central alarm station.	10.a Tests, inspections, or a combination of tests and inspections of unoccupied vital areas intrusion detection equipment and locking devices will be performed.	10.a Unoccupied vital areas are locked and intrusion is detected and annunciated in the central alarm station.
10.b Reserved.	10.b Reserved.	10.b Reserved.
11.a.i Security alarm annunciation and video assessment information are available in the central alarm station.	11.a.i Tests, inspections or a combination of tests and inspections of alarm annunciation and video assessment equipment will be performed.	11.a.i Security alarm annunciation and video assessment information is available in the central alarm station.
11.a.ii Reserved.	11.a.ii Reserved.	11.a.ii Reserved.
11.b.i The central alarm station is located inside a protected area and the interior is not visible from the perimeter of the protected area.	11.b.i Inspection of the central alarm station location will be performed.	11.b.i The central alarm station is located inside a protected area and the interior of the central alarm station is not visible from the perimeter of the protected area.
11.b.ii Reserved.	11.b.ii Reserved.	11.b.ii Reserved.
11.c Reserved.	11.c Reserved.	11.c Reserved.
11.d Reserved.	11.d Reserved.	11.d Reserved.
11.e Reserved.	11.e Reserved.	11.e Reserved.
12. Secondary security power supply system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.	12. Inspections of the secondary security power supply system will be performed.	12. The secondary security power system for alarm annunciator equipment and non-portable communications equipment is located within a vital area.

MIC-04-T1-00005

MIC-04-T1-00005

Table 2.12-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
13.a Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking, (e.g. an automatic indication is provided when failure of the alarm system or a component occurs or when on standby power), and alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm) and location.	13.a Tests will be performed on security alarm devices and transmission lines.	13.a Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power) and the alarm annunciation indicates the type of alarm, (e.g., intrusion alarms, emergency exit alarm) and location.
13.b.i Intrusion detection and assessment systems are designed to provide visual display and audible annunciation of alarms in the central alarm station.	13.b.i Tests will be performed on Intrusion detection and assessment systems.	13.b.i The intrusion detection system provides a visual display and audible annunciation of alarms in the central alarm station.
13.b.ii Reserved.	13.b.ii Reserved.	13.b.ii Reserved.
14. Intrusion detection systems equipment records onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date and time.	14. Tests will be performed on the intrusion detection systems recording equipment.	14. Intrusion detection systems recording equipment is capable of recording each onsite security alarm annunciation including the location of the alarm, false alarm, alarm check, and tamper indication and the type of alarm, location, alarm circuit, date and time.
15.a Emergency exits through vital area boundaries are alarmed and secured by locking devices that allow prompt egress during an emergency.	15.a Test, inspection or a combination of tests and inspections of emergency exits through vital area boundaries will be performed.	15.a Emergency exits through vital area boundaries are alarmed and secured by locking devices that allow prompt egress during an emergency.
15.b Reserved.	15.b Reserved.	15.b Reserved.

MIC-04-T1-00005

Table 2.12-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 4 of 4)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
16.a.i The central alarm station has conventional (land line) telephone service with local law enforcement authorities and a system for communication with the main control room.	16.a.i Tests, inspections or a combination of tests and inspections of the central alarm station communications capability with local law enforcement authorities and main control room will be performed.	16.a.i The central alarm station is equipped with conventional (land line) telephone service with local law enforcement authorities and has a system for communication with the main control room.
16.a.ii Reserved.	16.a.ii Reserved.	16.a.ii Reserved.
16.b.i The central alarm station is capable of continuous communication with security personnel.	16.b.i Tests, inspections or a combination of tests and inspections of the central alarm station continuous communication capabilities will be performed.	16.b.i The central alarm station is capable of continuous communication with security officers, watchmen or armed response individuals, or other security personnel that have responsibilities during a contingency response event.
16.b.ii Reserved.	16.b.ii Reserved.	16.b.ii Reserved.
16.c.i Non-portable communications equipment in the central alarm station remains operational from an independent power source in the event of loss of normal power.	16.c.i Tests, inspections, or a combination of tests and inspections of the non-portable communications equipment will be performed.	16.c.i All non-portable communication devices (including conventional telephone systems) in the central alarm station are wired to an independent power supply that enables those systems to remain operational (without disruption) during the loss of normal power.
16.c.ii Reserved.	16.c.ii Reserved.	16.c.ii Reserved.

MIC-04-T1-0005

MIC-04-T1-0005

MIC-04-T1-0005

Tier 2

Chapter 1

Chapter 1 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_10.04.08-8 S01	Table 1.9.1-1 Sheet 13 of 20)	1.9-15	Response to Amended RAI No. 251 MHI Letter No. UAP-HF-13182 Date 07/16/2013	Revised to show applicability of RG 1.143 to portion of the SGBD	-
DCD_10.04.08-8 S01	Table 1.9.2-10 (Sheet 15 of 20)	1.9-235	Response to Amended RAI No. 251 MHI Letter No. UAP-HF-13182 Date 07/16/2013	Revised to show RG of the SGBD for piping upstream of containment isolation valves to SRP 10.4.8 addressing GDC 2 and 4 compliance.	-
DCD_07.09-23 S03	Table 1.9.2-7 (Sheet 17 of 22)	1.9-168	Response to Amended RAI No. 710 MHI Letter No. UAP-HF-13158 Date 11/01/2013	Revised Table 1.9.2-7 (Sheet 17 of 22)	-
DCD_03.07.03-12	Table 1.8-2 (Sheets 6,7 of 38)	1.8-12 1.8-13	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the COL Item with reflecting on common basemat seismic analysis.	-
DCD_19-516 S01	Table 1.6-2 (Sheet 2 of 5)	1.6-4	Response to RAI No. 750	Added Section 19.1 to DCD Sections that	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			amended MHI Letter No. UAP-HF-13274 Date 11/25/2013	reference MUAP-08015.	
DCD_19-529 S01	Table 1.6-2 (Sheet 4 of 5)	1.6-6	Response to RAI No. 764 amended S01 MHI Letter No. UAP-HF-13276 Date 12/2/2013	Updated the revision number and date of MUAP-10018.	-
DCD_19-578 S01	5.4.7.2.3.6	5.4-47	Response to RAI No 983 amended MHI Letter No. UAP-HF-13299 Date 12/09/2013	Revised the description regarding operational consideration during mid-loop operation.	-
DCD_04.04-44	Table 1.8-2 (Sheet 13 of 38)	1.8-19	Response to RAI No. 1063 MHI Letter No. UAP-HF-13300 Date 12/10/2013	To evaluate design limits for Min. DNBR was added in COL4.4(1) in table1.8-2.	-
DCD_08.02-17 S01	Table 1.8-2 (Sheet 17of 38)	1.8-23	Response to RAI No. 1017 amended S01 MHI Letter No. UAP-HF-13312 Date 12/18/2013	Design description was added to address the NRC Bulletin 2012-01.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-01-00011	ACRONYMS AND ABBREVIATIONS Table 1.6-1	1-xxii 1.6-2	MHI Letter No. UAP-HF-14012 Date 02/20/2014	Revised revision number/date of Quality Assurance Program (QAP) Description, PQD-HD-19005. Revised acronyms consistent with PQD-HD-19005 changes.	-
MIC-04-01-00008	1.5.4 Table 1.6-2 (Sheet 4 of 5)	1.5-4 1.6-6	Technical Report (MUAP-10023-P/NP) update	MUAP-10023-P/NP revision was updated from Revision 5 December, 2012 to Revision 7 December, 2013.	0
MIC-04-01-00010	Table 1.6-2 (Sheet 2 of 5)	1.6-4	Typo	Re-order to be in numerical order in Column “DCD Section Number”.	0
DCD_14.03.07-94	Table 1.6-2 (Sheet 2 and 5 of 5) Table 1A-	1.6-4 1.6-7 1A-2	Response to RAI No. 1052 MHI Letter No. UAP-HF-	Technical report MUAP-07028 and MUAP-07029 are regarded	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	1(Sheet 1 of 1)		13237 Date 9/20/2013	as Tier 2* due to the designation by NRC.	
MIC-04-01-00009	Table 1.6-2 (Sheet 3 of 5)	1.6-5	Technical Report (MUAP-09023-P/NP) update	MUAP-09023-P/NP revision was updated from Revision 0 March, 2010 to Revision 1 August, 2013.	0
MIC-04-01-00002	Table 1.6-2 (Sheet 2 of 5)	1.6-4	Issue revised Technical Report MUAP-09002 Rev.4 MHI Letter No. UAP-HF-13275 Date 11/29/2013	Revision number of MUAP-09002 change from 3 to 4.	0
MIC-04-01-00004	Table 1.8-2 (Sheet 7 of 38) (Sheet 7[8] of 38) (sheet 9 of 38) (Sheet 10[11] of 38)	1.8-13 1.8-13 [1.8-14] 1.8-15	Correction of topographical error	Replaced "GMRS." with "GMRS, and foundation input response spectra (FIRS)." in COL 3.7(20). Replaced "SASSI" with "computer" in COL 3.7(25). Replaced "seismic criteria" with "conditions" in COL 3.8(19).	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
		1.8-16 [1.8-17]		Added "COL Applicant will satisfy the earth pressure enveloping criteria if the site specific earth pressure demands on the basemat exterior walls are enveloped by two standard design earth pressure loads." following after "The COL Applicant is to verify that lateral earth pressures used in the standard plant design envelope site-specific lateral earth pressures." in COL 3.8(34).	
DCD_19-593	Table 1.8-2 (Sheet 36[37] of 38) COL 19.3(4)	1.8-42 [1.8-43]	Response to RAI No. 1049 MHI Letter No. UAP-HF-13242 Date 09/26/2013	Added statement "(including consideration of severe accident mitigation alternatives)"	0
DCD_07.05-18 S02	Table 1.9.1-1(Sheet 9 of 20)	1.9-11	Response to RAI No. 568 amended 02	Revised Table 1.9.1-1 (Sheet 9 of 20).	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			MHI Letter No. UAP-HF-13223 Date 09/112013		
MIC-04-01-00001	1.9.5.2	1.9-456	Editorial	Change the line of sentence.	0
MIC-04-01-00001	Table 1.9.5-8 (Sheet 12 of 12)	1.9-519	Editorial	Replace "No action" with "Action for this item is designated as a COL item, COL 1.9(7)"	0
DCD_06.03-112 S01	Table 1A-1	1A-2	Response to RAI No. 997 MHI Letter No. UAP-HF-13219 Date 09/05/2013	Changed Tier2 * designation related to debris amount input for GSI-191 issue.	0

/*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

1.5-5 Safety I&C System Description and Design Process, MUAP-07004-P (Proprietary) and MUAP-07004-NP (Non-Proprietary), Revision 7, Mitsubishi Heavy Industries, Ltd., May 2011.

1.5-6 Safety System Digital Platform -MELTAC-, MUAP-07005-P (Proprietary) and MUAP-07005-NP (Non-Proprietary), Revision 8, Mitsubishi Heavy Industries, Ltd., July 2011.

1.5-7 Defense-in-Depth and Diversity, MUAP-07006-P-A (Proprietary) and MUAP-07006-NP-A (Non-Proprietary), Revision 2, Mitsubishi Heavy Industries, Ltd., September 2008.

1.5-8 HSI System Description and HFE Process, MUAP-07007-P (Proprietary) and MUAP-07007-NP (Non-Proprietary), Revision 5, Mitsubishi Heavy Industries, Ltd., November 20011.

1.5-9 Qualification and Test Plan of Class 1E Gas Turbine Generator System, MUAP-07024-P (Proprietary) and MUAP-07024-NP (Non-Proprietary), Revision 3, Mitsubishi Heavy Industries, Ltd., September 2012.

1.5-10 Human System Interface Verification and Validation (Phase 1a), MUAP-08014-P (Proprietary) and MUAP-08014-NP (Non-Proprietary), Revision 1, Mitsubishi Heavy Industries, Ltd., May 2011.

1.5-11 Initial Type Test Result of Class 1E Gas Turbine Generator System, MUAP-10023-P (Proprietary) and MUAP-10023-NP (Non-Proprietary), Revision ~~5~~7, Mitsubishi Heavy Industries, Ltd., December 201~~2~~3. MIC-04-01-00008

Table 1.6-2 Material Referenced as Technical Reports (Sheet 2 of 5)

Report Number(1)	Title	DCD Section Number(2)
[*MUAP-07028-P MUAP-07028-NP*]*	[*Probability of Missile Generation From Low Pressure Turbines, Revision 2, June 2013.*]*	3.5.1, 10.2.3
[MUAP-07029-P MUAP-07029-NP]*	[*Probabilistic Evaluation of Turbine Valve Test Frequency, Revision 3, June 2013.*]*	3.5.1, 10.2.3
MUAP-07030	US-APWR Probabilistic Risk Assessment, Revision 3, June 2011.	6.2.5, 7.1.3, 7.5.1, 17.4.7, 19.0, 19.1.4, 19.2.3 19B
MUAP-07031-P MUAP-07031-NP	Subcompartment Analysis for US-APWR Design Confirmation, Revision 1, October 2009.	6.2.1
MUAP-07032-P MUAP-07032-NP	Criticality Analysis for US-APWR New and Spent Fuel Storage Racks, Revision 1, December, 2009.	9.1.1
MUAP-07033-P MUAP-07033-NP	Mechanical Analysis for US-APWR New and Spent Fuel Racks, Revision 0, March, 2009.	9.1.2
MUAP-07035	Structural Analysis for US-APWR Reactor Coolant Pump Motor Flywheel, Revision 0, December 2007.	5.4.1
MUAP-07036	Justification for Deviations Between NUREG-1431 Revision 3.1 and US-APWR Technical Specifications, Revision 2, November 2009.	16
MUAP-08001-P MUAP-08001-NP	US-APWR Sump Strainer Performance, Revision 8, June 2013	5.2.3, 6.2.2, 6.3.2
MUAP-08007-P MUAP-08007-NP	Evaluation Results of US-APWR Fuel System Structural Response to Seismic and LOCA Loads, Revision 2, December 2010.	4.2.3
MUAP-08009	US-APWR Test Program Description, Revision 1, October 2009.	1.8.1, 14.2.1, 14.2.2, 14.2.3, 14.2.4, 14.2.5, 14.2.6, 14.2.13, 14.3.4
MUAP-08011-P MUAP-08011-NP	US-APWR Sump Debris Chemical Effects Test Results, Revision 3, June 2013.	6.2.2
MUAP-08012-NP	US-APWR Sump Strainer Stress Report, Revision 2, June 2013.	6.2.2
MUAP-08013-P MUAP-08013-NP	US-APWR Sump Strainer Downstream Effects, Revision 5, June 2013.	6.2.2, 6.3.2
MUAP-08014-P MUAP-08014-NP	Human System Interface Verification and Validation (Phase 1a), Revision 1, May 2011.	1.5.2, 18.1.1, 18.1.5, 18.2.3, 18.2.1,18.7.2,18.10.2, 18.10.3
MUAP-08015	US-APWR Equipment Qualification Program, Revision 1, November 2009.	1.8.1, 3.11, 3.11.2, 3.11.4, 3.11.5, 3.11.6, 3.11.7, 3D.1.7, 3D.3, 7.1.3, 7.5.1, ~~1.8.1,3.11.2,3D.3~~, 19.1
MUAP-09001-P MUAP-09001-NP	Summary of Design Transient, Revision 0, February 2009.	3.9.1
MUAP-09002-P MUAP-09002-NP	Summary of Seismic and Accident Load Conditions for Primary Components and Piping, Revision ~~3~~4 ~~July~~November 2013.	~~3.7.2,~~ 3.9.2, 3.9.3, 3C.5

DCD_14.03.07-94
DCD_14.03.07-94
MIC-04-01-00010
DCD_19-516 S01
MIC-04-01-00002

Table 1.6-2 Material Referenced as Technical Reports (Sheet 3 of 5)

Report Number(1)	Title	DCD Section Number(2)
MUAP-09010-P MUAP-09010-NP	Summary of Stress Analysis Results for Reactor Coolant Loop Piping, Revision 3, March 2011.	3B.3.2.4
MUAP-09013-P MUAP-09013-NP	Summary of Stress Analysis Results for Main Steam Piping inside Containment, Revision 2, March 2011.	3B.3.2.4
MUAP-09014-P MUAP-09014-NP	Thermal-Hydraulic Analysis for US-APWR Spent Fuel Racks, Revision 0, June 2009.	9.1.2
MUAP-09016	US-APWR Reactor Vessel Pressure and Temperature Limits Report, Revision 3, February 2013.	5.3.2, 16 (5.6.4)
MUAP-09017-P MUAP-09017-NP	Justification for 20 Years Inspection Interval for Reactor Coolant Pump Flywheel, Revision 0, July 2009.	5.4.1
MUAP-09018-P MUAP-09018-NP	Calculation Methodology for Reactor Vessel Neutron Flux and Fluence, Revision 1, October 2009.	4.3.2
MUAP-09019-P MUAP-09019-NP	HSI Design, Revision 2, October 2012.	18.1.1, 18.1.2, 18.1.3, 18.1.4, 18.1.5, 18.3.3, 18.4.2, 18.4.3, 18.6.1, 18.6.3, 18.7.2
MUAP-09020-P MUAP-09020-NP	Function Assignment Analysis for Safety Logic System, Revision 2, May 2011.	7.3.1
MUAP-09021-P MUAP-09021-NP	Response Time of Safety I&C System, Revision 3, August 2013.	7.9.2, 16(B3.3.1), 16(B3.3.2)
MUAP-09022-P MUAP-09022-NP	US-APWR Instrument Setpoint Methodology, Revision 3, July 2013.	7.2.1, 7.2.2, 7.3.2, 7.5.1, 16(B3.3.1), 16(B3.3.2), 16(B3.3.3), 16(B3.3.4), 16(B3.3.5), 7.8.1
MUAP-09023-P MUAP-09023-NP	Onsite AC Power System Calculation, Revision ~~0~~1, ~~March~~August 201~~0~~3.	8.3.1 MIC-04-01-00009
MUAP-09025-P MUAP-09025-NP	CFD Analysis for Advanced Accumulator, Revision 3, June 2013.	6.3.2
MUAP-10002-P MUAP-10002-NP	Damping Ratio of SC Structure, Revision 0, March 2011.	3.7.1, 3.7.2, 3.7.3
MUAP-10003	US-APWR Physical Security Hardware ITAAC Abstracts, Revision 1, March 2011.	14.3.4
MUAP-10006	Soil-Structure Interaction Analyses and Results for the US-APWR Standard Plant, Revision 3, November 2012.	3.7.1, 3.7.2, Appendix 3H (3H.1), Appendix 3I (3I.1)
MUAP-10008	Staffing and Qualifications Implementation Plan, Revision 2, October 2012.	18.1.1, 18.1.5, 18.5.1, 18.5.3
MUAP-10009	HSI Design Implementation Plan, Revision 2, October 2012.	18.1.1, 18.1.5, 18.6.3, 18.7.2, 18.7.3
MUAP-10012	Verification and Validation Implementation Plan, Revision 2, October 2012.	18.1.1, 18.1.5, 18.6.3

Table 1.6-2 Material Referenced as Technical Reports (Sheet 4 of 5)

Report Number(1)	Title	DCD Section Number(2)
MUAP-10013	Design Implementation Plan, Revision 2, October 2012.	18.1.1, 18.1.5, 18.6.3, 18.11.2
MUAP-10014	Human Performance Monitoring Implementation Plan, Revision 2, October 2012.	18.1.1, 18.1.5, 18.6.3, 18.12.2
MUAP-10017-P MUAP-10017-NP	US-APWR Methodology of Pipe Break Hazard Analysis, Revision 3, May 2012.	3.6.2
MUAP-10018-P MUAP-10018-NP	US-APWR Containment Performance for Pressure Loads, Revision 01, JuneAugust 20103.	3.8.1, 19.2.4
MUAP-10019-P MUAP-10019-NP	Calculation Methodology for Radiological Consequences in Normal Operation and Tank Failure Analysis, Revision 1, March 2011.	11.2.3, 11.3.3
MUAP-10020-P MUAP-10020-NP	Safety-Related Air Conditioning, Heating, Cooling, and Ventilation Systems Calculations, Revision 2, March 2013.	6.2.9, 6.5.7, 9.4.8
MUAP-10022	Evaluation on Jet Impingement Issues Associated with Postulated Pipe Rupture, Revision 2, May 2012.	3.6.2
MUAP-10023-P MUAP-10023-NP	Initial Type Test Result of Class 1E Gas Turbine Generator System, Revision 57, December 20123.	1.5.2, 3.10.2, 8.3.1, 16 (B3.8.1)
MUAP-10024	Structural Design Criteria for US-APWR Access Building, Revision 1, November 2011.	3.7.2
MUAP-11002	Turbine Building Model Properties, SSI Analyses, and Structural Integrity Evaluation, Revision 3, February 2013.	3.7.2
MUAP-11003-P MUAP-11003-NP	Summary of Stress Analysis Results for Pressurizer Surge Line. Revision 1, March 2011.	3B.3.2.4
MUAP-11005	Research Achievements of SC Structure and Strength Evaluation of US-APWR SC Structure Based on 1/10th Scale Test Results, Revision 1, December 2012.	3.8.3
MUAP-11007	Ground Water Effects on SSI, Revision 2, November 2012.	3.7.2, 3.8.5
MUAP-11012-P MUAP-11012-NP	US-APWR RCCA Insertion Limit Load Test Report, Revision 0, March 2011.	3.9.5
MUAP-11013	Containment Internal Structure Design and Validation Methodology, Revision 2, February 2013	3.8.3
MUAP-11014-P MUAP-11014-NP	Over Temperature ΔT and Over Power ΔT Reactor Trip Functions and Setpoint Determination Process, Revision 0, June 2011.	7.2.1
MUAP-11017-P MUAP-11017-NP	Hydraulic Test of the Full Scale US-APWR Fuel Assembly, Revision 0, May 2011	4.2

DCD_19-529 S01

MIC-04-01-0 0008

Table 1.6-2 Material Referenced as Technical Reports (Sheet 5 of 5)

Report Number[1]	Title	DCD Section Number[2]
MUAP-11018	Containment Internal Structure: Stiffness and Damping for Analysis, Revision 1, February 2013	3.8.3
MUAP-11019	Containment Internal Structure: Design Criteria for SC Walls, Revision 1, January 2013	3.8.3
MUAP-11020	Containment Internal Structure: Anchorage and Connection Design and Detailing, Revision 1, February 2013	3.8.3
MUAP-12002-P MUAP-12002-NP	Sliding Evaluation and Results, Revision 1, January 2013	1.8.1, 3.8.5
MUAP-12006	SC Wall Fabrication, Construction and Inspection, Revision 0, February 2013	1.8.1, 3.8.3
MUAP-13001-P MUAP-13001-NP	US-APWR Criticality Evaluation Following Small Break LOCAs, Revision 0, January 2013	15.6.5
MUAP-13002	US-APWR Evaluation and Design Enhancement to Incorporate Lessons Learned from TEPCO's Fukushima Daiichi Nuclear Power Station Accident, Revision 0, March 2013	1.9, 3.4.1, 8.4.1
MUAP-13011-P MUAP-13011-NP	Criticality Analysis for US-APWR Containment Racks, Revision 0, May 2013	9.1.1
MUAP-13012-P MUAP-13012-NP	Mechanical Analysis for US-APWR Containment Racks, Revision 0, May 2013	9.1.2
MUAP-13013-P MUAP-13013-NP	Thermal-Hydraulic Analysis for US-APWR Containment Racks, Revision 0, May 2013	9.1.2

NOTE(1): -P(**p**roprietary), -NP(**n**on-**p**roprietary)

(2): If actual section number is indicated as x.y.z.a.b, a x.y.z level is used for the DCD Section Number. (ex. When actual section number is 6.3.2.1.2, only 6.3.2 is used in Table.

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2*. Any change to this information requires prior NRC approval. DCD_14.03.07-94

Table 1.8-2 Compilation of All Combined License Applicant Items for Chapters 1-19 (Sheet 7 of 38)

COL ITEM NO.	COL ITEM
COL 3.7(13)	*The COL Applicant is to set the value of the OBE that serves as the basis for defining the criteria for shutdown of the plant, according to the site specific conditions.*
COL 3.7(14)	*The COL Applicant is to determine from the site-specific geological and seismological conditions if multiple US-APWR units at a site will have essentially the same seismic response, and based on that determination, choose if more than one unit is provided with seismic instrumentation at a multiple-unit site.*
COL 3.7(15)	*Deleted*
COL 3.7(16)	*The COL Applicant shall provide free-field seismic instrumentation in the vicinity of the power block area at surface grade which shall be used for shutdown determination, unless otherwise justified. Any such justification shall be based on conditions and requirements specific to the site, and shall include justification for evaluation of OBE exceedance using only measurements from instrumentation installed on the buildings and the structures of the US-APWR standard plant.*
COL 3.7(17)	*Deleted*
COL 3.7(18)	*Deleted*
COL 3.7(19)	*The COL Applicant is to identify the implementation milestone for the seismic instrumentation implementation program based on the discussion in Subsections 3.7.4.1 through 3.7.4.5.*
COL 3.7(20)	*The COL Applicant is to validate the site-independent seismic design of the standard plant for site-specific conditions, including geological, seismological, and geophysical characteristics, and to develop the site-specific GMRS, and foundation input response spectra (FIRS).*
COL 3.7(21)	*The COL Applicant is responsible for the seismic design of those seismic category I and seismic category II SSCs that are not part of the US-APWR standard plant using site-specific SSE design ground motion.*
COL 3.7(22)	*The COL Applicant may consider the seismic wave transmission incoherence of the input ground motion when performing the site-specific SSI analyses.*
COL 3.7(23)	~~*The COL Applicant is to verify that the results of the site-specific SSI analysis for the broadened ISRS are enveloped by the US-APWR standard design.*~~*The COL Applicant shall verify, for pipe and equipment within the standard plant structures, the site-specific ISRS, at specified locations, are enveloped by the corresponding Standard Plant ISRS as described in Subsection 3.7.2.4.5.*
COL 3.7(24)	*The COL Applicant is to verify that the site-specific ratios V/A and AD/V2 (A, V, D, are PGA, ground velocity, and ground displacement, respectively) are consistent with characteristic values for the magnitude and distance of the appropriate controlling events defining the site-specific uniform hazard response spectra.*

MIC-04-01-00004

DCD_03.07.03-12

Table 1.8-2 Compilation of All Combined License Applicant Items for Chapters 1-19 (Sheet 8 of 38)

COL ITEM NO.	COL ITEM
COL 3.7(25)	*The COL Applicant referencing the US-APWR standard design is required to perform a site-specific SSI analysis for the R/B complex, utilizing a ~~SASSI~~ computer program such as ACS SASSI (Reference 3.7-17) which contains time history input incoherence function capability. The SSI analysis using SASSI is required in order to confirm that site-specific effects are enveloped by the standard design.*
COL 3.7(26)	*SSI effects are also considered by the COL Applicant in site-specific seismic design of any seismic category I and II structures that are not included in the US-APWR standard plant. The site-specific SSI analysis is performed for buildings and structures including, but not limited to, to the following:* • *Seismic category I ESWPT* • *Seismic category I PSFSV* • *Seismic category I UHSRS*
COL 3.7(27)	*It is the responsibility of the COL Applicant to perform any site-specific seismic analysis for dams that may be required.*
COL 3.7(28)	*Deleted.*
COL 3.7(29)	*Table 3.7.2-1, as updated by the COL Applicant to include site-specific seismic category I structures, presents a summary of dynamic analysis and combination techniques including types of models and computer programs used, seismic analysis methods, and method of combination for the three directional components for the seismic analysis of the US-APWR standard plant seismic category I buildings and structures.*
COL 3.7(30)	*The COL Applicant is to provide site-specific design ground motion time histories and durations of motion.*
COL 3.7(31)	*The COL Applicant shall verify, for internal forces and ISRS, the site-specific ARS, at specified locations, are enveloped by the corresponding Standard Plant ARS for frequencies as described in Subsection 3.7.2.4.5.*
COL 3.8(1)	*Deleted*
COL 3.8(2)	*Deleted*
COL 3.8(3)	*It is the responsibility of the COL Applicant to assure that any material changes based on site-specific material selection for construction of the PCCV meet the requirements specified in ASME Code, Section III, Article CC-2000 of the code and supplementary requirements of RG 1.136 as well as SRP 3.8.1.*
COL 3.8(4)	*Deleted*
COL 3.8(5)	*Deleted*
COL 3.8(6)	*Deleted*

MIC-04-01-00004

DCD_03.07.03-12

Table 1.8-2 Compilation of All Combined License Applicant Items for Chapters 1-19 (Sheet 9 of 38)

COL ITEM NO.	COL ITEM
COL 3.8(7)	*It is the responsibility of the COL Applicant to determine the site-specific aggressivity of the ground water/soil and accommodate this parameter into the concrete mix design as well as into the site-specific structural surveillance program.*
COL 3.8(8)	*Deleted*
COL 3.8(9)	*Deleted*
COL 3.8(10)	*The prestressing system is designed as a strand system, however the system material may be switched to a wire system at the choice of the COL Applicant. If this is done, the COL Applicant is to adjust the US-APWR standard plant tendon system design and details on a site-specific basis.*
COL 3.8(11)	*Deleted*
COL 3.8(12)	*Deleted*
COL 3.8(13)	*Deleted*
COL 3.8(14)	*It is the responsibility of the COL Applicant to establish programs for testing and ISI of the PCCV, including periodic inservice surveillance and inspection of the PCCV liner and prestressing tendons in accordance with ASME Code Section XI, Subsection IWL.*
COL 3.8(15)	*The COL Applicant is responsible for the seismic design of those seismic category I and seismic category II SSCs not seismically designed as part of the US-APWR standard plant, including the following seismic category I structures:* • *ESWPT* • *UHSRS* • *PSFSVs*
COL 3.8(16)	*Deleted*
COL 3.8(17)	*Deleted*
COL 3.8(18)	*Deleted*
COL 3.8(19)	*The design and analysis of the ESWPT, UHSRS, PSFSVs, and other site-specific structures are to be provided by the COL Applicant based on site-specific ~~seismic criteria~~conditions.*
COL 3.8(20)	*The COL Applicant is to identify any applicable externally generated loads. Such site-specific loads include those induced by floods, potential non-terrorism related aircraft crashes, explosive hazards in proximity to the site, and projectiles and missiles generated from activities of nearby military installations.*
COL 3.8(21)	*Deleted*

MIC-04-01-00004

Table 1.8-2 Compilation of All Combined License Applicant Items for Chapters 1-19 (Sheet 11 of 38)

COL ITEM NO.	COL ITEM
COL 3.8(32)	*Unless the COL Applicant can demonstrate by means of pseudo-static analysis that seismic induced sliding does not occur and that a safety factor against sliding ≥ 1.1 is achieved, site-specific seismic sliding stability analyses is to be performed using the seismic sliding stability analysis methodology described in Technical Report MUAP-12002 (Reference 3.8-82). If a non-linear sliding analysis is performed, the COL Applicant is to demonstrate that resulting sliding is ≤ 0.75 in. for the R/B complex and ≤ 0.20 in. for the T/B.*
COL 3.8(33)	*The COL Applicant is to provide detailed construction and inspection plans and documents in accordance with MUAP-12006.*
COL 3.8(34)	*The COL Applicant is to verify that lateral earth pressures used in the standard plant design envelope site-specific lateral earth pressures. The COL Applicant will satisfy the earth pressure enveloping criteria if the site specific earth pressure demands on the basemat exterior walls are enveloped by two standard design earth pressure loads.*
COL 3.8(35)	*The COL Applicant shall verify that: (1) the degree of compaction for the backfill placed beneath foundation has to be analyzed by field density tests only, since shear wave velocity or SPT measurements cannot be performed for such a thin layer of soil and (2) the friction resistance requirement, specified as a friction angle of at least 35°, is met.*
COL 3.9(1)	*The COL Applicant is to assure snubber functionality in harsh service conditions, including snubber materials (e.g., lubricants, hydraulic fluids, seals).*
COL 3.9(2)	*The first COL Applicant is to complete the vibration assessment program, including the vibration test results, consistent with guidance of RG 1.20. Subsequent COL Applicant need only provide information in accordance with the applicable portion of position C.3 of RG 1.20 for Non-Prototype internals.*
COL 3.9(3)	*Deleted*
COL 3.9(4)	*Deleted*
COL 3.9(5)	*Deleted*
COL 3.9(6)	*The COL Applicant is to provide the program for IST of dynamic restraints in accordance with the ASME OM Code.*
COL 3.9(7)	*Deleted*
COL 3.9(8)	*The COL Applicant is to administratively control the edition and addenda to be used for the IST program and to provide a full description of their IST program for pumps, valves, and dynamic restraints.*
COL 3.9(9)	*Deleted*
COL 3.9(10)	*The COL Applicant is to identify the site-specific active pumps.*
COL 3.9(11)	*The COL Applicant is to provide site-specific, safety-related pump IST parameters and frequency.*
COL 3.9(12)	*The COL Applicant is to provide type of testing and frequency of site-specific valves subject to IST in accordance with the ASME Code.*

MIC-04-01-00004

Table 1.8-2 Compilation of All Combined License Applicant Items for Chapters 1-19 (Sheet 37 of 38)

COL ITEM NO.	COL ITEM
COL 19.3(4)	*The Probabilistic Risk Assessment and Severe Accident Evaluation (including consideration of severe accident mitigation alternatives)is updated as necessary to assess specific site information and all associated potential site-specific external hazards (both natural and man-made hazards) that may affect the facility are screened out or subjected to analysis.*
COL 19.3(5)	*The COL Applicant will identify a milestone for completing a comparison of the as-built SSC HCLPFs to those assumed in DCD Subsection 19.1.5.1. Deviations from the HCLPF values or other assumptions in the seismic margins evaluation shall be analyzed to determine if any new vulnerability have been introduced. The COL Applicant will (1) update the design-specific plant system and accident sequence analysis to incorporate site-specific effects (soil liquefaction, slope failure, etc.) and plant-specific features (safety-related site-specific structures), as applicable, (2) update the SEL with HCLPF values and associated failure modes to adequately reflect the site-specific effects and plant-specific features of the COL site (for soil-related failure modes, the site-specific GMRS can be used for HCLPF calculations), (3) demonstrate that the design-specific plant-level HCLPF capability is maintained in the COL application, and (4) ensure that equipment on the SEL which is qualified by seismic testing will be procured to the appropriate HCLPF capacity.*
COL 19.3(6)	*The COL Applicant develops or describes an accident management program which includes emergency operating procedures, consideration of risk-significant operator actions listed in DCD Table 19.1-119, training, and human reliability related severe accident guidance programs. Insights gained from the design specific PRA, including insights created by the incorporation of site and plant-specific information available at the COL application phase (for aspects of the design which are not bounded by the Standard Plant PRA), are to be reflected appropriately. The COL Applicant reviews that operator actions remain valid with respect to all applicable events and modes of operation. As detailed design information becomes available and site-specific procedures are developed, the human reliability analysis in the PRA is revised and updated.*
COL 19.3(7)	*The COL Applicant will provide a milestone for completing the equipment survivability assessment of the as-built equipment required to mitigate severe accidents (electrical penetrations, hydrogen igniters and containment pressure (wide range)) to provide reasonable assurance that they will operate in the environmental conditions resulting from hydrogen burns associated with severe accidents for which they are intended and over the time span for which they are needed.*
COL 19.3(8)	*The COL applicant will describe the uses of PRA in support of licensee programs and identify and describe risk-informed applications being implemented during the COL application, construction and operational phases.*
COL 19.3(9)	*The COL applicant will describe the PRA maintenance and upgrade programs.*

DCD_19-593

Table 1.9.1-1 US-APWR Conformance with Division 1 Regulatory Guides (Sheet 9 of 20)

Reg Guide Number	Title	Status	Corresponding Chapter/Section/ Subsection
1.90	Inservice Inspection of Prestressed Concrete Containment Structures with Grouted Tendons (Rev. 1, August 1977)	Not applicable. US-APWR is not among the designs covered by this RG. US-APWR PCCV tendon type is Ungrouted.	N/A
1.91	Evaluations of Explosions Postulated To Occur on Transportation Routes Near Nuclear Power Plants (Rev. 1, February 1978)	Not applicable. RG applies to a site-specific analysis.	N/A
1.92	Combining Modal Responses and Spatial Components in Seismic Response Analysis (Rev. 2, July 2006)	Conformance with no exceptions identified.	3.7.2.6, 3.7.2.7, 3.7.3.1.7.1, 3.9.2.2.5, 3.10.2, 3.12.3.2.4, 3.12.5.5
1.93	Availability of Electric Power Sources (Rev. 0, December 1974)	Conformance with no exceptions identified.	16.0
1.94	Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Rev. 1, April 1976)	Withdrawn	N/A
1.97	Criteria For Accident Monitoring Instrumentation For Nuclear Power Plants (Rev. 4, June 2006)	Conformance with ~~no~~ exceptions ~~identified~~. DCD accident monitoring information was selected using the methodology in the RG but without using plant procedures as a source document; RG uses plant procedures as a source document.	7.5.1.1, 7.5.2.1, 14.3.4, 7.1.1, 11.5.1, 11.5.2, 12.3.4
1.99	Radiation Embrittlement of Reactor Vessel Materials (Rev. 2, May 1988)	Conformance with no exceptions identified.	5.3.1, 5.3.2
1.100	Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants (Rev. 2, June 1988 and Rev. 3, September 2009)	Conformance with no exceptions identified.	Rev. 2 for Section 8.3.2, Rev. 3 for Section 3.9.2, 3.9.2.2.1, 3.9.6.1, 3.10.1 and 3.10.2

DCD_07.05-18 S02

In SRP 1.0 section I.9, “Conformance with Regulatory Criteria”, the subsection entitled “Advanced and Evolutionary Light-Water Reactor Design Issues” suggests “A table that identifies the information addressing the applicable licensing and policy issues developed by the NRC and documented in SECY-93-087 and the associated SRM for advanced and evolutionary light-water reactor designs is reviewed.”

1.9.5.1 Summary of SECY Letters

For completeness, all of the SECY letters listed in Reg Guide 1.206 section C.I.1.9.5 are presented in Table 1.9.5-1, along with a general summary of each document in the column entitled “Comment”. Those SECY letters that require additional detailed treatment of requirements are so indicated in Table 1.9.5-1, with direction as appropriate to Tables 1.9.5-2, 1.9.5-3 and 1.9.5-4.

1.9.5.2 Conformance with SECY-12-0025

This section addresses the conformance of the US-APWR with SECY-12-0025, “Proposed Orders and Requests for Information in Response to Lessons Learned from Japan’s March 11, 2011, Great Tohoku Earthquake and Tsunami” dated February 17, 2012. This section also addresses a summary of the strategy and design features of US-APWR for each NRC Fukushima Near-Term Task Force (NTTF) recommendation. For the NTTF recommendations for which updated regulatory requirements have been issued as of May 31, 2013, the updated requirements are referenced, instead of the original requirements specified in SECY-12-0025.

Conformance with the NRC requirements and recommendations are summarized in the following evaluation tables. Each of the tables includes the title and description of the requirement or request for information and a description of how the US-APWR addresses the issue. MIC-04-01-00001

Table 1.9.5-5 Conformance with SECY-12-0025 Recommendation 4.2 Mitigation Strategies for Beyond Design Basis External Events

Table 1.9.5-6 Conformance with SECY-12-0025 Recommendation 7.1 Reliable Spent Fuel Pool Instrumentation

Table 1.9.5-7 Conformance with SECY-12-0025 Recommendation 9.3 Provisions for Enhancing Emergency Preparedness

Table 1.9.5-8 US-APWR Strategy for Addressing Tier 1 and Tier 2 NTTF Recommendations

Each of the tables presents the title and requirement or the request for information identified in SECY-12-0025 or SECY-11-0093, and a description of how the US-APWR addresses the issue.

For requirements evaluated to not be applicable, justification for this determination is provided in the status column of the table. Any exemptions or alternate approaches proposed for the US-APWR are also included in the response column of each table along with the technical justification.

Table 1.9.5-8 US-APWR Strategy for Addressing Tier 1 and Tier 2 NTTF Recommendations (Sheet 12 of 12)

NRC Recommendations/Requirements SECY-11-0093, SECY-11-0137, SECY-12-0025, SECY-12-0095		US-APWR Strategy	US-APWR Design Features and DCD Section
	2. Provide an implementation schedule of the time needed to conduct the on-site and augmented staffing assessment. If any modifications are determined to be appropriate, please include in the schedule the time to implement the changes. 3. Identify how the augmented staff would be notified given degraded communications capabilities. 4. Identify the methods of access (e.g., roadways, navigable bodies of water and dockage, airlift, etc.) to the site that are expected to be available after a widespread large scale natural event. 5. Identify any interim actions that have been taken or are planned prior to the completion of the staffing assessment. 6. Identify changes that have been made or will be made to your emergency plan regarding the on-shift or augmented staffing changes necessary to respond to a loss of all ac power, multiunit event, including any new or revised agreements with offsite resource providers (e.g., staffing, equipment, transportation, etc.).		
9.3	**Emergency preparedness regulatory actions (the remaining portions of Recommendation 9.3, with the exception of Emergency Response Data System (ERDS) capability addressed in Tier 3)** **(SECY-11-0137)** 1. Engage stakeholders to inform the development of acceptance criteria for the licensee examination of planning standard elements related to the recommendations, and 2. Develop and issue an order to address those changes necessary in emergency plans to ensure adequate response to SBO and multiunit events specific to (1) adding guidance to the emergency plan that documents how to perform a multiunit dose assessment, (2) conduct periodic training and exercises for multiunit and prolonged SBO scenarios, (3) practice (simulate) the identification and acquisition of offsite resources, to the extent possible, and (4) ensure that EP equipment and facilities are sufficient for dealing with multiunit and prolonged SBO scenarios.	~~No action~~Action for this item is designated as a COL item, COL 1.9(7)	N/A

MIC-04-01-00001

Table 1A-1 Index of Tier 2* Information (Sheet 1 of 1)

Description	Expiration	Location
Cladding oxide thickness inspection and documentation	Successful completion of inspection and documentation for first plant.	4.2.4.5.3
~~Containment latent debris and miscellaneous debris design basis limits~~Limits for fiber and particle components of the containment latent debris, the miscellaneous debris, and the operational margin fiber loading	None	6.2.2.3.2, 6.2.2.3.3, Table 6.2.2-4
Requirement to maintain the turbine missile generation probability, P_1, less than the acceptable limit of 1 x 10^{-5} per year	First full power operation	3.5.1.3.2 10.2.2.1
References to MUAP-07028-P/MUAP-07028-NP, “Probability of Missile Generation From Low Pressure Turbines” and MUAP-07029-P/MUAP-07029-NP, “Probabilistic Evaluation of Turbine Valve Test Frequency”	First full power operation	Table 1.6-2 3.5.1.3.2 3.5.5 10.2.6

DCD_06.03-112 S01

DCD_14.03.07-94

Tier 2

Chapter 2

Chapter 2 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.07.03-12	Table 2.0-1 (Sheet 6 of 6)	2.0-7	Response to RAI No. 950 MHI Letter No. UAP-HF-13249 Date 10/16/2013	Site parameters of soil were added for clarification based upon subject RAI.	0
MIC-04-02-00001	Table 2.0-1 (Sheet 6 of 6)	2.0-7	Editorial	Changed to Number 1” to “15”.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Table 2.0-1 Key Site Parameters (Sheet 6 of 6)

Geology, Seismology, and Geotechnical Engineering	
Parameter Description	**Parameter Value**
Maximum slope for foundation-bearing stratum	20° from horizontal in untruncated strata
Safe-shutdown earthquake (SSE) ground motion	0.3 g peak ground acceleration
SSE (certified seismic design) horizontal ground response spectra	Regulatory Guide (RG) 1.60, enhanced spectra in high frequency range (see Figure 3.7.1-1)
SSE (certified seismic design) vertical ground response spectra	RG 1.60, enhanced spectra in high frequency range (see Figure 3.7.1-2)
Potential for surface tectonic deformation at site	None within the exclusion area boundary
Subsurface stability – minimum allowable static bearing capacity	15,000 lb/ft^2
Subsurface stability – minimum allowable dynamic bearing capacity, normal conditions plus SSE	35,000 lb/ft^2
Minimum factors of safety for bearing capacity without justification (16)	FS = 2.5 - for static bearing capacity FS = 2.0 - for dynamic bearing capacity
Subsurface stability – minimum shear wave velocity at SSE input at ground surface	1,000 ft/s
Subsurface stability – liquefaction potential	None (for seismic category I structures)
Minimum angle of internal friction for engineered fill ~~and~~or natural in-situ granular soil subgrades beneath the basemat	35°
Presence of fine-grained materials, i.e., silts and clays classified as ML, CL, MH, CH in the Unified Soil Classification System, within 6 in. of bottom of R/B Complex and T/B basemat	Not Permitted
Maximum moist unit weight for engineered fill or natural in-situ granular soil at the sides of the foundation	125 pounds per cubic feet
Maximum angle of internal friction for engineered fill or natural in-situ granular soil at the sides of the foundation	35°
Total settlement of R/B complex foundation during construction and operational life(14)(15)	9.0 in.
Differential settlement across R/B complex foundation in any direction during construction and operational life(14)(15)	5.5 in.
Maximum differential settlement between buildings during operational life(14)(15)	0.5 in.
Maximum tilt of R/B complex foundation generated during operational life of the plant(14)(15)	1/2000

DCD_03.07.03-12

DCD_03.07.03-12

MIC-04-02-00001

NOTES:

Tier 2

Chapter 3

Chapter 3 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.09.05-34 S01	Table 3.9-2	3.9-101	Response to Amended RAI No. 663 MHI Letter No. UAP-HF-13179 Date 07/19/2013	Additional information is included in 'Technical Basis ' of Table 3.9-2 according to Amend response to RAI No.663	-
DCD_03.08.05-52	3.8.5.4.2.1	3.8-77	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Provides clarification on the application of concrete strengths used in the R/B complex basemat.	-
DCD_03.08.05-63	3.8.5.5.1	3.8-95	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Change deletes a sentence from DCD Section 3.8.5.5.1.	-
DCD_03.08.05-67	New Table 3.8.5-6	3.8-155	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Change provides a correction to a value in Table 3.8.5-6.	
DCD_03.08.05-47	3.8.5.1.1	3.8-89	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Provides additional detail regarding structures supported by the peripheral portion of the R/B complex basemat.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.08.05-58	3.8.5.4.4	3.8-93	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Makes a correction to the title of Figure 3.8.5-5.	-
DCD_03.08.05-49	Figure 3.8.5-5	3.8-290	Response to RAI No. 1045 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Provides additional details on the modeling of the Access Building in the settlement analysis.	-
DCD_03.08.01-15	3.8.1.3.4	3.8-8	Response to RAI No. 1040 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Provides additional detail of PCCV liner supports and displacement monitoring of concrete formed surfaces.	-
DCD_03.08.01-18	3.8.1.4.1.1	3.8-10	Response to RAI No. 1040 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Provides additional detail regarding concrete cracking considerations.	-
DCD_03.08.01-19	3.8.1.4.1.2	3.8-12	Response to RAI No. 1040 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Adds reference to the methodology Code; ACI 349-06, Appendix RE.	-
DCD_03.08.01-20	3.8.1.4.1.3	3.8-12	Response to RAI No. 1040 MHI Letter	Deletes a sentence that is redundant to explanation of tolerances.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			No. UAP-HF-13193 Date 08/02/2013		
DCD_03.08.04-53	3.8.4.1	3.8-56	Response to RAI No. 1044 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Corrects the separation distance between the R/B complex super-structure and the T/B.	-
DCD_03.08.04-54	3.8.4.3.4.6	3.8-65	Response to RAI No. 1044 MHI Letter No. UAP-HF-13193 Date 08/02/2013	Deletes an unnecessary statement regarding stress allowables.	-
DCD_03.08.04-57	3.8.4.4.1.1	3.8-72	Response to RAI No. 1044 MHI Letter No. UAP-HF-13193Date 08/02/2013	Provides additional details regarding the loading of the south exterior wall of the R/B.	-
DCD_03.08.05-46	3.8.5.1.1	3.8-89	Response to RAI No. 1045 MHI Letter No. UAP-HF-13207 Date 8/26/2013	Sentence reworded for clarity and accuracy.	-
DCD_03.07.03-12	3.7.2.4.5	3.7-34 to 36	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the description with reflecting on common basemat seismic analysis.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.07.03-12	3.7.5	3.7-63 3.7-64	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the description with reflecting on common basemat seismic analysis.	-
DCD_03.07.03-12	New Subsection 3.8.4.4.1.4	3.8-76	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the description with reflecting on common basemat seismic analysis.	-
DCD_03.07.03-12	Appendix 3I Cover Page	-	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the description with reflecting on common basemat seismic analysis.	-
DCD_03.07.03-12	Appendix 3I	3I-1	Response to RAI No. 950 MHI Letter No. UAP-HF-13202 Date 08/07/2013	Change the description with reflecting on common basemat seismic analysis.	-
DCD-03.08.05-48	Figure 3.8.5-1 Figure 3.8.5-3	3.8-286 3.8-288	Response to RAI No. 1045 MHI Letter No. UAP-HF-13207 Date 08/26/2013	Revise the floor plan and cross section drawings.	-
DCD_03.11-62	Table 3.9-14 (Sheets 2, 3, 5, 12, 13, 16	3.9-131, 3.9-132, 3.9-134,	Response to Amended RAI No. 1031	Inservice Test Requirements are updated.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	through 18, 21 through 23, 36, 37, 60, 82 through 84, 102, 103, 117, 118, 123, 124 of 124)	3.9-141, 3.9-142, 3.9-145 through 3.9-147, 3.9-150 through 3.9-152, 3.9-165, 3.9-166, 3.9-189, 3.9-211 through 3.9-213, 3.9-231, 3.9-232, 3.9-246, 3.9-247, 3.9-252, 3.9-253	MHI Letter No. UAP-HF-13176 Date 8/2/2013		
DCD_03.11-62	Appendix 3D Table 3D-2 (Sheets 10, 28 through 38, 40 through 45, 47, 49, 50, 52, 56, 63, 65 pf 65)	3D-16, 3D-34 through 3D-44, 3D-46 through 3D-51, 3D-53, 3D-55, 3D-56, 3D-58, 3D-62, 3D-69, 3D-71	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	Inservice Test Requirements are updated.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.08.01-22	3.8.1.5.1.3	3.8-20	Response to RAI No. 1040 MHI Letter No. UAP-HF-13217 Date 09/03/2013	Incorporates a clause from ASME, Section III, Subarticle CC-3422.1(c)(3) as requested by the NRC.	-
DCD_03.07.01-44	3.7.1.3	3.7-11	Response to RAI No. 1047 MHI Letter No. UAP-HF-13265 Date 11/8/2013	Provide the detail of developing of site specific soil profiles and input motion that will be generated in accordance with Regulatory Guide 1.208 and DC/COL-ISG-17.	-
MIC-04-03-00004	3.9.10 3C.5 3C.7	3.9-106 3C-4 3C-5	Issue revised Technical Report MUAP-09002 Rev.4 MHI Letter No. UAP-HF-13275 Date 11/29/2013	Revision number of MUAP-09002 change from 2 to 4.	-
DCD_19-529 S01	3.8.7	3.8-108	Response to RAI No. 764 amended S01 MHI Letter No. UAP-HF-13276 Date 12/2/2013	Updated the revision number and date of MUAP-10018.	-
DCD_09.01.02-52	3.1.6.3.1	3.1-39	Response to RAI No. 1055	Added the description about the condition to	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			MHI Letter No. UAP-HF-13273 Date 12/02/2013	meet the requirement for maintaining reactivity controls.	
DCD_09.01.02-56	3.1.6.4.1 3.1.6.5.1	3.1-40	Response to RAI No. 1055 MHI Letter No. UAP-HF-13273 Date 12/02/2013	Revised to describe the portable ARM used to warn personnel of deteriorating conditions in the refueling cavity near the containment racks.	-
DCD_03.11-63 S01	3.11 3.11.1.1 3.11.1.4 3.11.2.2 3D.1.1	3.11-1 3.11-5 3.11-7 3.11-10 3D-1	Response to RAI No. 1034 amended 01 MHI Letter No. UAP-HF-13284 Date 12/06/2013	Revised subsections 3.11, 3.11.1.1, 3.11.1.4, 3.11.2.2, and 3D.1.1.	-
MIC-04-03-00003	Table 3.2-2 (Sheet 33 of 53)	3.2-50	Editorial	Replace “N/A” with “A”. Replace “I” with “NS”.	0
DCD_14.03.07-94	3.5.1.3.2 3.5.5	3.5-11 3.5-20 3.5-21	Response to RAI No. 1052 MHI Letter No. UAP-HF-13237 Date 9/20/2013	Technical report MUAP-07028 and MUAP-07029 are regarded as Tier 2* due to the designation by NRC.	0
MIC-04-03-00011	Table 3.6-2 (Sheet 1 of 4)	3.6-43	Correction of topographical error	Delete line in #5 in	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00016	3.7.1.1 3.7.1.2 3.7.1.3 3.7.2.1 3.7.2.3.1 3.7.2.3.2 3.7.2.3.5 3.7.2.6 3.7.2.7 3.7.2.8 3.7.3.3	3.7-5 3.7-7 3.7-9 3.7-10 3.7-12 3.7-13 3.7-15 [3.7-16] 3.7-18 3.7-19 [3.7-20] 3.7-22 3.7-23 through 3.7-25 [3.7-23 through 3.7-3.7-26] 3.7-38 [3.7-40] 3.7-39 3.7-40 [3.7-41 3.7-42] 3.7-42 [3.7-43 3.7-44] 3.7-53 3.7-54	Clarified the location of Tier 2* information MHI Letter No. UAP-HF-13240 Date 09/30/2013	Tier 2* information should be used italic form, enclosed in squared brackets, and added the asterisk after the closing bracket. Added the note of Tier 2* information at the end of subsection.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	   3.7.6 Table 3.7.1-3 Table 3.7.2-2 Table 3.7.2-3 Tables 3.7.3-1(a) and (b)	[3.7-55 3.7-56] 3.7-64 3.7-65 3.7-66 3.7-68 [3.7-66 3.7-67 3.7-68 3.7-70] 3.7-71 [3.7-73] 3.7-77 [3.7-79] 3.7-78 [3.7-80] 3.7-81 3.7-82 [3.7-83] 3.7-84			
DCD_03.07.02-230	3.7.2.4.5	3.7-37	Response to RAI No. 1050 MHI Letter No. UAP-HF-14005 Date 01/10/2014	The change is made to reflect the correct Appendix being referenced.	0
MIC-04-03-00019	3.7.2.3.2 Table 3.7.2-4	3.7-19 [3.7-20] 3.7-80	Editorial Editorial	Corrected the reference number. Corrected Table	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	(Sheet 2 of 2)	[3.7-82]		3.7.2-4.	
MIC-04-03-00003	3.7.2.3.2	3.7-19 [3.7-20]	Editorial	Insert a space between “Complex” and “Dynamic”.	0
MIC-04-03-00013	3.7.2.8	3.7-42 [3.7-44]	Correction of topographical error	Replaced seismic category I with safety-related	0
MIC-04-03-00014	3.7.5	3.7-63 3.7-64 [3.7-64, 3.7-65]	Correction of topographical error	Replaced GMRS with GMRS, and foundation input response spectra (FIRS) in COL 3.7(20) Replaced SASSI with computer in COL 3.7(25)	0
MIC-04-03-00001	3.8.3.1.5, 2nd paragraph	3.8-35 3-8-36 [3.8-36]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “nominal” to “typical” in 2nd sentence; change “tie bars, fabricated from carbon steel plate, or by carbon steel web plates” to “carbon steel tie bars and web plates” in 3rd sentence; “primary functions of the web-plates are” to “web plates also function” in 6th sentence; insert “and web plates” behind “faceplates” in 7th sentence; and change “web-	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				plates" to "web plates" in 8th sentence	
MIC-04-03-00001	3.8.3.1.7, 1st paragraph	3.8-36	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "at elevation" before "76 ft, 5 in."	0
MIC-04-03-00001	3.8.3.1.7, 2nd paragraph	3.8-36 [3.8-37]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "1/8 in." before "stainless"; change "over the ½-in." to "that is bonded to the ½ in."; and insert "by the hot rolling bonding process" after "steel plates" in 1st sentence, and delete "ceiling and" in 2nd sentence	0
MIC-04-03-00001	3.8.3.1.8	3.8-36 [3.8-37]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "The RWSP is formed by wall of SC modules" to The walls of the RWSP are formed by SC modules"	0
MIC-04-03-00001	3.8.3.1.9, 1st paragraph	3.8-37	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert ", except for the heat exchanger rooms," after "compartments" in 2nd sentence, and insert "Heat exchanger rooms	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				are formed by the secondary shield wall on one side and the other sides are formed by reinforced concrete structures." as new 3rd sentence	
MIC-04-03-00001	3.8.3.1.10, 2nd paragraph, 2nd sentence	3.8-37 [3.8-38]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "through" to "using a steel baseplate that also serves as the containment liner. The baseplate is anchored to the basemat with"	0
MIC-04-03-00001	3.8.3.3.5, 2nd paragraph	3.8-40	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "of the SC modules" after "Temperatures", change "450" to "365", and change "surface" to exposed steel surface, and the concrete temperatures do not exceed 350°" in 1st sentence; and delete 3rd & 4th sentences	0
MIC-04-03-00001	3.8.3.4, 6th paragraph, 2nd sentence	3.8-41 [3.8-42]	Editorial MHI Letter No. UAP-HF-13252 Date	Change "were evaluated as" to "are"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			10/18/2013		
MIC-04-03-00001	3.8.3.4, 12th paragraph, next to last sentence	3.8-43	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Three" to "Seven", and insert ", Table 3.8.3-5, and Appendix 3L" after "Subsection 3.8.3.5.2"	0
MIC-04-03-00001	3.8.3.4, 15th paragraph, last sentence	3.8-43 [3.8-44]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert ", as defined below" after "1.5%"	0
MIC-04-03-00001	3.8.3.4, 17th paragraph (CIS Category 2)	3.8-44	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "thicknesses ranging from 58.5 in. to 67 in." to "a thickness of 67 in."	0
MIC-04-03-00001	3.8.3.4, 18th paragraph (CIS Category 3)	3.8-44	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert as last sentence: "The primary shield walls between Elevations 35'-11" and 46'-11" also have a multicellular arrangement consisting of inner and outer faceplates and multiple transverse web plates."	0
MIC-04-03-	3.8.3.4, 22nd paragraph	3.8-44	Clarification	Delete 1st sentence, and change	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
00001	(CIS Category 6)	[3.8-45]	MHI Letter No. UAP-HF-13252 Date 10/18/2013	"nonstructural concrete provided for shielding purposes" to "composite concrete infill" in 2nd sentence	
MIC-04-03-00001	3.8.3.4, 26th paragraph (Condition B)	3.8-45	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change 1st sentence to "The accident thermal conditions postulated involve peak steel surface temperatures of 249° to 365° F as shown in Table 3.8.1-3."; and change "equilibrate to" to "are below" in 3rd sentence	0
DCD_03.08.03-94	3.8.3.4 3.8.1.4.1 Table 3.8.3-4 Figure 3.8.3-12 through Figure 3.8.3-18	3.8-48 3.8-49 3.8-124 3.8-245 through 3.8-251	Response to RAI No. 958 MHI Letter No. UAP-HF-13249 Date 10/16/2013	Definition of Category 6 was revised.	0
DCD_03.08.03-96	3.8.3.4.1	3.8-48 [3.8-49, 3.8-50]	Response to RAI No. 958 MHI Letter No. UAP-HF-13249 Date 10/16/2013	Incorporates the use of RSA in lieu of Equivalent Static procedures for CIS structural design.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	3.8.3.4.3, 1st paragraph	3.8-49 [3.8-50]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "during normal operations" after "stable" in 1st sentence; delete 2nd sentence; insert "for normal operating thermal loading" after "analysis" and change "these loads" to "steady-state structural temperatures" in 3rd sentence; and replace last sentence with 2 new sentences	0
MIC-04-03-00001	3.8.3.4.3, 2nd paragraph	3.8-49 [3.8-51]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace 2nd – 4th sentences with 3 new sentences	0
MIC-04-03-00001	3.8.3.4.3, 3rd paragraph	3.8-49 [3.8-51]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "load" to "peak surface temperatures" and change "three dimensional" to "3-D" in 1st sentence; and delete last sentence	0
MIC-04-03-00001	3.8.3.4.3, 3rd paragraph	3.8-49 [3.8-51]	Expanded discussion MHI Letter No. UAP-HF-13252 Date	Insert 3 new paragraphs after 3rd paragraph	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			10/18/2013		
MIC-04-03-00001	3.8.3.4.3, last paragraph	3.8-49 [3.8-51, 3.8-52]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert new sentence at end of paragraph	0
MIC-04-03-00001	3.8.3.4.5, 2nd paragraph, 1st sentence	3.8-50 [3.8-53]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “Figure 3.8.3-7” to “Appendix 3L”	0
MIC-04-03-00001	3.8.3.4.5, 3rd paragraph	3.8-50 [3.8-53]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert “Section 1.0 through 9.0” after “MUAP-11019”; insert 4 new sentences after 1st sentence; and create paragraph break after 5th sentence	0
MIC-04-03-00001	3.8.3.4.5, 4th paragraph	3.8-51 [3.8-53]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete “as shown in Figure 3.8.3-7 sheet 5” in 2nd sentence	0
MIC-04-03-00001	3.8.3.4.5.1 Title	3.8-51 [3.8-54]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “Loads and Bending” to “Tension, Axial Compression, and Out-of-Plane Flexural Strength”	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	3.8.3.4.5.2, 3rd paragraph, last sentence	3.8-52 [3.8-54]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "of MUAP-11019 Equation 7.3-1 (Reference 3.8-71)" after "term"	0
MIC-04-03-00002	3.8.3.4.5.3, 2nd paragraph, last sentence	3.8-52 [3.8-55]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "ignored" to "reduced"; and change "involving seismic loading" to "in accordance with ACI 349-06 Section 11.2.3 (Reference 3.8-8) and MUAP-11019 Equation 6.2-3 (Reference 3.8-71)"	0
MIC-04-03-00001	3.8.3.4.5.4	3.8-52 [3.8-55]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "restraint of thermal growth" to "operating and accident thermal loading"	0
MIC-04-03-00002	3.8.3.4.5.4	3.8-52 [3.8-55, 3.8-56]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert 2 sentences (including 2 bullets) as new paragraph after existing paragraph	0
DCD_03.08.03-112	3.8.3.5.2 Table 3.8.3-5	3.8-89 [3.8-58] 3.8-121 [3.8-125,	Response to RAI No. 1024 MHI Letter No. UAP-HF-13249 Date	Critical sections of CIS were updated based upon final CIS basic design calculation.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	Appendix 3L.5.2	3.8-126] 3L-13 3L-16 [3L-14, 3L-15]	10/16/2013		
DCD_03.08.05-51	3.8.5.4.2	3.8-91 [3.8-95]	Response to RAI No. 1045 MHI Letter No. UAP-HF-14005 Date 01/10/2014	Enhancement of description for analyses for basemat loads during operation.	0
DCD_03.08.05-54	3.8.5.4.3	3.8-92 [3.8-96 3.8-97]	Response to RAI No. 1045 MHI Letter No. UAP-HF-13249 Date 10/16/2013 And MHI Letter No. UAP-HF-14005 Date 1/10/2014	Evaluation methodology of basemat was modified for clarification.	0
DCD_03.08.05-55	3.8.5.4.3	3.8-92 [3.8-97]	Response to RAI No. 1045 MHI Letter No. UAP-HF-13249 Date 10/16/2013	The depth of soil subgrade model was added.	0
MIC-04-03-00015	3.8.6	3.8-102 [3.8-107]	Correction of topographical error	Replaced seismic criteria with conditions in COL 3.8(19)	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
		3.8-104 [3.8-109]		Added "COL Applicant will satisfy the earth pressure enveloping criteria if the site specific earth pressure demands on the basemat exterior walls are enveloped by two standard design earth pressure loads." following after "The COL Applicant is to verify that lateral earth pressures used in the standard plant design envelope site-specific lateral earth pressures." in COL 3.8(34).	
MIC-04-03-00001	Table 3.8.1-3 (Sheet 2 of 2)	3.8-114 [3.8-118]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace table, and insert note 8.	0
DCD_03.08.01-17	Table 3.8.1-4	3.8-115 [3.8-119]	Response to RAI No. 1040 MHI Letter No. UAP-HF-14005 Date 01/10/2014	Note 1 added to indicate accerations are obtained from SASSI Dynamic Analysis.	0
MIC-04-03-00001	Table 3.8.3-3	3.8-119 [3.8-	Clarification MHI Letter	Change “elevation 3 ft, 7 in.” to “the top of basemat	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
		123]	No. UAP-HF-13252 Date 10/18/2013	under CIS"	
MIC-04-03-00002	Table 3.8.3-3	3.8-119 [3.8-123]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "thermal load" to "thermal loads"	0
MIC-04-03-00001	Table 3.8.3-4 note	3.8-120 [3.8-124]	Clarification Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "provided are those considered" to "provided in this table are considered"; and "Subsection 3.8.3.4." to "Subsection 3.8.3.4.1."	0
DCD_03.08.03-115	Table 3.8.3-7 (Sheet 1 of 3)	3.8-123 [3.8-128]	Response to RAI No. 1051 MHI Letter No. UAP-HF-14005 Date 01/10/2014	Tie bar orientation corrected.	0
MIC-04-03-00001	Figure 3.8.1-11	3.8-201 [3.8-206]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete figure image, and replace title with "Deleted"	0
MIC-04-03-00001	Figure 3.8.1-12	3.8-202 [3.8-207]	Clarification MHI Letter No. UAP-HF-	Delete figure image, and replace title with "Deleted"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13252 Date 10/18/2013		
MIC-04-03-00001	Figure 3.8.1-13	3.8-203 [3.8-208]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete figure image, and replace title with “Deleted”	0
MIC-04-03-00001	Figure 3.8.3-7	3.8-227 to 3.8-231 [3.8-232 through 3.8-235]	Clarification MHI Letter No. UAP-HF-13241 Date 10/01/2013 and No. UAP-HF-13252 Date 10/18/2013	Delete “(Sheet 1 of 5)” in Figure 3.8.3-7 title, and delete Figure 3.8.3-7 Sheets 2 through 5 in their entirety (including title lines)	0
MIC-04-03-00001	Figure 3.8.3-10	3.8-238 [3.8-243]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace figure	0
MIC-04-03-00001	Figure 3.8.3-11	3.8-239 [3.8-244]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete figure image, and replace title with “Deleted”	0
MIC-04-03-00020	3.9.4.2.1	3.9-63	Responsed to NRC audit comment having consistency	Replaced “617” with “550.6”	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			with Design Specification and DCD.		
MIC-04-03-00010	Table 3.9-7 (Sheet 2, 3 of 3)	3.9-117 3.9-118	Editorial correction	"CWS" is changed to "ECWS"	0
MIC-04-03-00008	Table 3.9-14 (Sheet 1 through 124 of 124[125])	3.9-130 through 3.9-253 [3.9-254]	Editorial correction	"Safety Functions(2)" is changed to "Safety Functions".	0
MIC-04-03-00012	Table 3.9-15	3.9-255 [3.9-256]	Incorrect spelling	Correct 'Occurance' to 'Occurrence' in the first row 3rd column of Table 3.9-15	0
MIC-04-03-00018	3.10.6	3.10-22	Technical Report (MUAP-10023-P/NP) update	MUAP-10023-P/NP revision was updated from Revision 5 December, 2012 to Revision 7 December, 2013.	0
DCD_03.11-66 S02	3.11	3.11-2	Response to RAI No. 1034 S02 MHI Letter No. UAP-HF-13314 Date 12/19/2013	Revised Section 3.11.	0
MIC-04-03-00017	Table 3D-2 (Sheet 54[61]	3D-60 [3D-67]	Editorial Correction	Changed locations of VRS-MEH-204A, B, C, and D from	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	of 65[73])			"R/B" to "PS/B" and from "8" to "5". Changed Radiation Conditions of VRS-MEH-204A, B, C, and D from "Harsh" to "Mild".	
MIC-04-03-00017	Table 3D-2 (Sheet 63[70]of 65[73])	3D-69 [3D-76]	Editorial Correction	Changed locations of VAS-AOD-511 and -512 from "6" to "13-3". Changed Radiation Conditions of VAS-AOD-511 and -512 from "Harsh" to "Mild".	0
MIC-04-03-00017	Table 3D-2 (sheet 64[71] of 65[73])	3D-70 [3D-77]	Editorial Correction	Changed Equipment Tag of "VWS-TCV-344" to "VWS-TCV-334". Changed locations of VWS-TCV-304, -314, -324 and -344 from "8" to "6".	0
MIC-04-03-00001	Acronyms and Abbreviations	3L-vii [3L-ix]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Add acronyms "PSW", "PZR", "RC", "RCL", "SSE", and "TeR" with corresponding abbreviated words	0
MIC-04-03-00001	3L.1, last paragraph, last sentence	3L-1	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "reinforcement bar" before "placement," and insert comma after "hardware"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	3L.3.1, last paragraph, last sentence	3L-3	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "from azimuth degrees." to "west of azimuth zero degrees."	0
MIC-04-03-00001	3L.3.2	3L-3	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace text in its entirety	0
MIC-04-03-00001	3L.3.4 Title	3L-3 [3L-4]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Building" to "Buildings"	0
MIC-04-03-00001	3L.3.4, 1st paragraph	3L-3 [3L-4]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "PS/B" to "Power Source Building (PS/B)"	0
MIC-04-03-00001	3L.4.1, 1st sentence	3L-4	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "containment internal structure (CIS)" to "CIS"	0
MIC-04-03-00001	3L.4.1.1, 2nd paragraph, 3rd sentence	3L-4 [3L-5]	Editorial MHI Letter No. UAP-HF-	Insert "the" before "model"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13252 Date 10/18/2013		
MIC-04-03-00001	3L.4.1.2	3L-5, [3L-6]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace text in its entirety	0
MIC-04-03-00001	3L.4.1.3, 5th paragraph, 1st sentence	3L-6	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "square root of the sum of the squares (SRSS)" to "SRSS"	0
MIC-04-03-00001	3L.4.2.1, 2nd paragraph, 4th & 5th sentences	3L-7 [3L-8]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "(Reference 3L-3)" after "ASME Code" and "(Reference 3L-4)" after "NCA-3254"	0
MIC-04-03-00001	3L.4.2.2, last paragraph	3L-8	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "to" before preclude.	0
MIC-04-03-00001	3L.4.2.3	3L-8 [3L-9]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace text in its entirety	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	3L.4.2.4, 2nd paragraph, 1st sentence	3L-8 [3L-9]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “and analysis is performed for all considered load cases.” to “and the limiting load case combination is considered in the design.”	0
MIC-04-03-00001	3L.4.2.4, 2nd paragraph	3L-8 [3L-9]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert 4 sentences after 2nd sentence of paragraph	0
MIC-04-03-00001	3L.4.2.4, 3rd paragraph	3L-8 [3L-10]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “limits” to “the tolerances” in 5th sentence, and delete 2nd and last sentences	0
MIC-04-03-00001	3L.4.2.4, 5th paragraph	3L-9 [3L-10]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete 2nd sentence in its entirety	0
MIC-04-03-00001	3L.4.2.4, last paragraph	3L-9 [3L-11]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “to” to “with” before “ACI” in 1st sentence, and change “per” to “in accordance with” before “ACI” in last	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				sentence	
MIC-04-03-00001	3L.5, last sentence	3L-10 [3L-11]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "where a specific comparison is made against a code permissible strength" to "where a member/element stress due to applied loading is compared against a code strength"	0
MIC-04-03-00001	3L.5.1, 2nd paragraph, 2nd sentence	3L-10 [3L-12]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "ratio" to "ratios"	0
MIC-04-03-00001	3L.5.1.1, 2nd paragraph	3L-10 [3L-12]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert comma after "Therefore" in 3rd sentence, and delete "(i.e. away from discontinuities)" in last sentence	0
MIC-04-03-00001	3L.5.1.1, last paragraph, 4th sentence	3L-11 [3L-12]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "in accordance with ASME Section III, Division 2 code (Reference 3L-3)"	0
MIC-04-03-00001	3L.5.1.2, 1st paragraph, 2nd sentence	3L-11[3L-12]	Editorial MHI Letter No. UAP-HF-	Change "provides" to "provide"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13252 Date 10/18/2013		
MIC-04-03-00001	3L.5.1.2, 2nd paragraph, 5th sentence	3L-11 [3L-13]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "in accordance with ASME Section III, Division 2 code (Reference 3L-3)"	0
MIC-04-03-00001	3L.5.1.3, 2nd paragraph, 7th sentence	3L-12 [3L-13]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "in accordance with ASME Section III, Division 2 code (Reference 3L-3)"	0
MIC-04-03-00001	3L.5.1.4, 2nd paragraph, 3rd sentence	3L-12 [3L-14]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "and or" to "and/or"	0
MIC-04-03-00001	3L.5.1.4, 3rd paragraph, 3rd sentence	3L-13 [3L-14]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "adjustments" to "adjustment"	0
MIC-04-03-00001	3L.5.1.4, 3rd paragraph, 4th sentence	3L-13 [3L-14]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "in accordance with ASME Section III, Division 2 code (Reference 3L-3)"	0
MIC-04-03-00001	3L.5.2	3L-13 [3L14]	Editorial MHI Letter	Change "refueling water storage pit	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			No. UAP-HF-13252 Date 10/18/2013	(RWSP)" to "RWSP" in 1st sentence	
MIC-04-03-00001	3L.5.2 (New 3L.5.2.1 through 3L.5.2.12)	3L-13 [3L16 through 3L-21]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert new subsections 3L.5.2.1 through 3L.5.2.12	0
MIC-04-03-00001	3L.5.3, 3rd paragraph, 1st sentence	3L-13 [3L-21]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert "the" after "between"	0
MIC-04-03-00001	3L.5.3, 8th paragraph, last sentence	3L-14 [3L-22]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "results" to "result"	0
MIC-04-03-00001	3L.5.3, 13th paragraph, 1st sentence	3L-15 [3L-23]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Spent Fuel Pit" to "SFP"	0
MIC-04-03-00001	3L.5.4 Title	3L-16 [3L-24]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Building" to "Buildings"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	3L.5.4, 3rd paragraph, last sentence	3L-17 [3L-25]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete “a” before “shared”	0
MIC-04-03-00001	3L.5.4, 4th paragraph, 2nd sentence	3L-17 [3L-25]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “ratio in for each direction terms” to “ratio for each direction in terms”	0
MIC-04-03-00001	3L.5.5, 2nd paragraph, 1st sentence	3L-18 [3L-26]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “column lines 1 and 13R” to “column lines 13R and 20R”	0
MIC-04-03-00001	3L.5.5, 2nd paragraph, 1st sentence	3L-18 [3L-27]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “it representative” to ”it is representative”	0
MIC-04-03-00001	3L.5.6, 2nd paragraph, 8th sentence	3L-19 [3L-27]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “DCRs” to “demand to capacity ratios (DCRs)”	0
MIC-04-03-00001	3L.5.7, 1st paragraph	3L-20 [3L-27, 3L-28]	Editorial MHI Letter No. UAP-HF-13252 Date	Change “There are a” to “There is a” in 1st sentence, and change “bending radius” to “bending	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			10/18/2013	radii" in 6th sentence	
MIC-04-03-00001	3L.5.7, 3rd paragraph, 1st sentence	3L-20 [3L-28]	Editorial MHI Letter No. UAP-HF-13252 Date 10/18/2013	Delete "required" after "I_{dh}"	0
MIC-04-03-00001	3L.6	3L-29	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Insert new References 3L-16 through 3L-20 after Reference 3L-15	0
MIC-04-03-00001	Table 3L-2, (Sheet 1 of 2)	3L-26 [3L-34]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change Wall Thickness for SEC1_3 from "2.67" to "3.33"; Wall Thickness for SEC2_6 from "0.33" to "3.33"; and Cover Depth for SEC3_1, SEC3_2, and SEC3_3 from "8.18" to "11.57"	0
MIC-04-03-00001	Table 3L-3 (Sheet 1 of 2)	3L-28 [3L-36]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change Wall Thickness for SEC1_3 from "2.67" to "3.33"; and Wall Thickness for SEC2_6 from "0.33" to "3.33"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-03-00001	Table 3L-11 (Sheet 2 of 2) Note 1	3L-34 [3L-42]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Abnormal/ Extreme" to "Abnormal" for LCC09 and for LCC10, Change "LCC11" to "LCC11 through LCC14," and delete "LCC12 Abnormal/Extreme"	0
MIC-04-03-00001	Table 3L-12, (Sheet 2 of 2), Summary of Controlling Loading Conditions	3L-36 [3L-44]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change the Load Cases identified in Summary of Controlling Loading Conditions	0
MIC-04-03-00001	Table 3L-12, (Sheet 2 of 2) Note 1	3L-36 [3L-44]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change "Abnormal/ Extreme" to "Abnormal" for LCC09 and for LCC10, Change "LCC11" to "LCC11 through LCC14," and delete "LCC12 Abnormal/Extreme"	0
MIC-04-03-00001	Table 3L-13 (Sheet 2 of 2) Summary of Controlling Loading Conditions	3L-38 [3L-46]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change the Load Cases identified in Summary of Controlling Loading Conditions	0
MIC-04-03-00001	Table 3L-13, (Sheet 2 of 2) Note 1	3L-38 [3L-46]	Clarification MHI Letter No. UAP-HF-	Change "Abnormal/ Extreme" to "Abnormal" for LCC09 and for	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13252 Date 10/18/2013	LCC10, Change “LCC11” to “LCC11 through LCC14,” and delete “LCC12 Abnormal/Extreme”	
MIC-04-03-00001	Table 3L-14 Note 1	3L-39 [3L-47]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “Abnormal/ Extreme” to “Abnormal” for LCC09 and for LCC10, Change “LCC11” to “LCC11 through LCC14,” and delete “LCC12 Abnormal/Extreme”	0
MIC-04-03-00001	Table 3L-18, Note 1	3L-41 [3L-49]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “Abnormal/ Extreme” to “Abnormal” for LCC09 and for LCC10, Change “LCC11” to “LCC11 through LCC14,” and delete “LCC12 Abnormal/Extreme”	0
MIC-04-03-00001	New Table 3L-20 through Table 3L-33	3L-42 [3L-51 through 3L-63]	Expanded discussion MHI Letter No. UAP-HF-13252 Date 10/18/2013	Add the Demand/Capacity Ratios table for CIS structural design	0
DCD_03.08.03-111	Figure 3L-58 and 3L- 59	3L-111 and 112	Response to RAI No. 1024 MHI Letter No. UAP-HF-	Revise the dimensions of RWSP Basemat Anchorage	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			14005 Date 1/10/2014	Connection	
MIC-04-03-00001	Figure 3L-17 (Sheet 3 of 5) Note	3L-59 [3L-80]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “B4B, B4-A1 and B5-B.” to “B4B, and B4-A1”.	0
MIC-04-03-00001	Figure 3L-24	3L-65 [3L-86]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Replace figure	0
MIC-04-03-00001	Figure 3L-25	3L-66 [3L-87]	Clarification MHI Letter No. UAP-HF-13252 Date 10/18/2013	Change “C3” to “C3 (far face)”	0
MIC-04-03-00001	Figure 3L-54 through Figure 3L-79 (except 3L-58, 59)	3L-84 [3L-106 through 3L-110, 3L-113 through 3L-131]	Expanded discussion MHI Letter No. UAP-HF-13241 Date 10/01/2013	Insert new figures 3L-54 through 3L-79 after Figure 3L-53 (except 3L-58, 59)	0
MIC-04-03-00006	Table 3D-2 (Sheet 20 of 65)	3D-26	Editorial	Correction of the environmental condition of Medium Voltage Power Cable (Harsh Specification).	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Table 3.2-2 Classification of Mechanical and Fluid Systems, Components, and Equipment (Sheet 33 of 53)

System and Components	Equipment Class	Location	Quality Group	Quality Assurance Classification(5)	Codes and Standards(3)	Seismic Category(4)	Notes	
Pressurizer liquid sampling piping and valves from hot leg up to and including the outermost containment isolation valve	2	PCCV R/B	B	Q	2	I		
Containment isolation valves PSS-MOV-071and 072 and piping between them	2	PCCV R/B	B	Q	2	I		
RHS loop sampling piping and valves up to and including the valves PSS-MOV-052A,B,C,D	2	R/B	B	Q	2	I		
Containment vessel atmosphere gas sample cooler	8	R/B	D	N	4	NS		
Containment vessel atmosphere gas sample moisture separator	8	R/B	D	N	4	NS		
Containment vessel atmosphere gas sample cooler-component cooling water side	3	R/B	C	Q	3	I		
Containment vessel atmosphere gas sampling hood	8	R/B	D	N	4	NS		
Containment vessel atmosphere gas sampling compressor	8	R/B	D	N~~/A~~	4	NS		MIC-04-03-00003
Containment vessel atmosphere sampling inlet, outlet valve PSS-MOV-301, 312	~~4~~8	R/B	D	N~~/A~~	4	~~I~~NS	The SSE will not result in a failure and interaction of these components that adversely affect the function of Containment Airborne Particulate Radioactivity Monitor addressed by RG 1.45.	MIC-04-03-00003

ejected missiles perforating intervening barriers and striking safety-related SSCs, P_2; and (c) the probability of struck SSCs failing to perform their safety function, P_3.

Mathematically, $P_4 = P_1 \times P_2 \times P_3$ where RG 1.115 (Reference 3.5-6) considers an acceptable risk rate for P_4 as less than 10^{-7} per year. The determination of P_1 (probability of turbine failure resulting in the ejection of turbine rotor (or internal structure) fragments through the turbine casing) is strongly influenced by the program for periodic inservice testing and inspection. Criteria as described in NUREG-0800 Standard Review Plan 3.5.1.3, Table 3.5.1.3-1 (Reference 3.5-7) correlates P_1 to operating cases necessary to obtain P_4 in an acceptable risk rate of 10^{-7} per year, where P_1 is less than $P_4 / (P_2 \times P_3)$ or 10^{-4}. The P_1 applicable to the US-APWR is described in Subsection 10.2.2. The COL Applicant is to commit to actions to maintain P_1 within this acceptable limit as outlined in RG 1.115, "Protection Against Low-Trajectory Turbine Missiles" (Reference 3.5-6) and SRP Section 3.5.1.3, "Turbine Missiles" (Reference 3.5-7). To maintain an acceptably low P_1, [*MUAP-07028-NP, "Probability of Missile Generation From Low Pressure Turbines" (Reference 3.5–17)*]* and [*MUAP-07029-NP, "Probabilistic Evaluation of Turbine Valve Test Frequency" (Reference 3.5-18)*]* are to be used to establish programs and criteria for preservice inspection, inservice inspection interval and turbine valve test frequency. These inspections and tests *[maintain the turbine missile generation probability, P_1, at less than 1×10^{-5} per year.]** Inservice inspection programs are to be maintained as outlined in SRP 3.5.1.3, Section II, Acceptance Criteria, Section 4 (Reference 3.5-7). DCD_14.03.07-94

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

3.5.1.4 Missiles Generated by Tornadoes and Hurricanes

The US-APWR design basis spectrum of tornado missiles conforms to the spectrum of missiles defined in Table 2 of "Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants", RG 1.76, Rev.1 (Reference 3.5-8) for a region I tornado, the most severe. The spectrum of missiles is chosen to represent: (1) a massive high-kinetic-energy missile that deforms on impact, (2) a rigid missile that tests penetration resistance, and (3) a small rigid missile of a size sufficient to pass through any opening in protective barriers.

Therefore, the spectrum of tornado missiles is as follows:

- A 4,000 pound automobile, 16.4 ft by 6.6 ft by 4.3 ft, impacting the structure at normal incidence with a horizontal velocity of 135 ft/s or a vertical velocity of 90.5 ft/s. To accommodate site-specific conditions where grades within 0.5 mile of plant structures may have elevations higher than grade at the structures, this missile is considered to potentially impact SSCs at any azimuthal direction and at any elevation up to the lowest roof level of R/B surrounding PCCV, which is 98'-5" above grade, at the maximum tornado missile velocity stated above.

3.5-6 Protection Against Low-Trajectory Turbine Missiles. Regulatory Guide 1.115, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, July 1977.

3.5-7 Turbine Missiles, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-0800, Standard Review Plan, Section 3.5.1.3, Rev. 3, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.5-8 Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants. Regulatory Guide 1.76, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.5-9 Kennedy, R.P., A Review of Procedures for the Analysis and Design of Concrete Structures to Resist Missile Impact Effects, Nuclear Engineering and Design, Volume 37, Number 2, pp 183-202, 1976.

3.5-10 Barrier Design Procedures, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-0800, Standard Review Plan, Section 3.5.3, Rev. 3, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.5-11 Cottrell, W.B. and Savolainen, A.W., U.S. Reactor Containment Technology, NSIC-5, Oak Ridge National Laboratories, Volume 1, Chapter 6, 1965.

3.5-12 Russell, C.R., Reactor Safeguards, MacMillan Publishers, New York, 1962.

3.5-13 Deleted.

3.5-14 Safety-Related Concrete Structures for Nuclear Power Plants (Other than Reactor Vessels and Containments), Regulatory Guide 1.142, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, November 2001.

3.5-15 Specification for the Design, Fabrication and Erection of Steel Safety-Related Structures for Nuclear Facilities, including Supplement 2 (2004), ANSI/AISC N690-1994, American National Standards Institute/American Institute of Steel Construction, 1994 & 2004.

3.5-16 Code Requirements for Nuclear Safety-Related Concrete Structures (ACI 349-06) and Commentary, American Concrete Institute, 2006.

3.5-17 [*Probability of Missile Generation From Low Pressure Turbines, MUAP-07028-P, Rev. 2 (Proprietary) and MUAP-07028-NP, Rev. 2 (Non-Proprietary), Mitsubishi Heavy Industries, Ltd., June 2013.*]* DCD_14.03.07-94

3.5-18 [*Probabilistic Evaluation of Turbine Valve Test Frequency, MUAP-07029-P, Rev. 3 (Proprietary) and MUAP-07029-NP, Rev. 3 (Non-Proprietary), Mitsubishi Heavy Industries, Ltd., June 2013.*]*

3.5-19 Tornado Design Classification, Regulatory Guide 1.117, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, April 1978.

3.5-20 Safety Implications Associated with In-Plant Pressurized Gas Storage and Distributions Systems in Nuclear Power Plants, NUREG/CR-3551 (ORNL/NOAC-214), U.S. Regulatory Commission, Washington, DC, May 1985.

3.5-21 Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants, RG 1.221, Rev. 0, U.S. Nuclear Regulatory Commission, Washington, D.C., October 2011.

3.5-22 Technical Basis for Regulatory Guidance on Design-Basis Hurricane-Borne Missile Speeds for Nuclear Power Plants, NUREG/CR-7004, U.S. Nuclear Regulatory Commission, Washington, D.C., November 2011.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2*. Any change to this information requires prior NRC approval. DCD_14.03.07-94

Table 3.6-2 List of High Energy Lines for Pipe Break Hazard Analysis, Including Properties of Internal and External Fluids (Sheet 1 of 4)

No.	System	Subsystem	Line No(s)	Nominal Diameter (Inches)	Outside Diameter (Inches)	Thickness (Inches)	Material	Temp (°F)	Pressure (psig)	Inside Pipe	Outside Pipe (°F , psig)
1	RCS	Primary Loop Hot Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316	617	2235	Subcooled liquid	Air (120, 0)
1	RCS	Primary Loop Hot Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316LN	617	2235	Subcooled liquid	Air (120, 0)
2	RCS	Primary Loop Crossover Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316	550.6	2235	Subcooled liquid	Air (120, 0)
3	RCS	Primary Loop Cold Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316	550.6	2235	Subcooled liquid	
2	RCS	Primary Loop Crossover Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316LN	550.6	2235	Subcooled liquid	Air (120, 0)
3	RCS	Primary Loop Cold Leg	31"ID-RCS-2501R A,B,C,D	31ID	37.12	3.06	SA182 F316LN	550.6	2235	Subcooled liquid	
4	RCS	Surge Line	16"-RCS-2501R B	16	16	1.594	SA-312 TP316	653	2235	Saturated liquid	Air (120, 0)
~~5~~	~~RCS~~	~~Surge Line~~	~~16"-RCS-2501R A~~	~~16~~	~~16~~	~~1.594~~	~~SA-312 TP316~~	~~449~~	~~400~~	~~Saturated liquid~~	~~Air (120, 0)~~ MIC-04-03-00011
6	RCS	Residual Heat Removal System (RHRS) Hot Leg Branch Line off RCS	10"-RCS-2501R A,B,C,D, Hot Leg Side	10	10.75	1.125	SA-312 TP316	617	2235	Subcooled liquid	Air (120, 0)
7	RCS	RHRS Cold Leg Branch Line off RCS	8"- RCS -2501R A,B,C,D (COLD LEG)	8	8.625	0.906	SA-312 TP316	550.6	2235	Subcooled liquid	Air (120, 0)
8	SIS	Accumulator System	14"-RCS-2501R A,B,C,D	14	14	1.406	SA-312 TP316	550.6	2235	Subcooled liquid	Air (120, 0)
9	RCS	Pressurizer Spray Line	6"-RCS-2501R B,C	6	6.625	0.719	SA-312 TP316	550.6	2235	Subcooled liquid	Air (120, 0)
10	MSS	Main Steam Line	32"-MSS-1532N A,B,C,D	32	32	1.496	SA-106 Gr.B	535	907	Saturated steam	Air (130, 0)
11	CVS	Aux. Spray Line	3"-RCS-2501	3	3.5	0.438	SA-312 TP316	554.6	2266	Subcooled liquid	Air (120, 0)
12	CVS	Aux. Spray Line	3"-CVS-2561	3	3.5	0.438	SA-312 TP316	554.6	2366	Subcooled liquid	Air (120, 0)
13	CVS	Charging Line	4"-CVS-2501	4	4.5	0.531	SA-312 TP316	554.6	2366	Subcooled liquid	Air (120, 0)

undue risk to the health and safety of the public will remain functional within applicable stress, strain, and deformation limits. For the US-APWR standard plant, the OBE is defined as 1/3 of the SSE (which is the CSDRS). Therefore, no specific analysis is required for the standard plant.

The COL Applicant is to set the value of the OBE that serves as the basis for defining the criteria for shutdown of the plant, according to the site-specific conditions. Subsection 3.7.4 describes the criteria and the seismic instrumentation used to determine whether the OBE has been exceeded.

It is recognized that during the life of the plant, the site may be subjected to seismic excitations of lower levels than the SSE. This can have an effect of reducing the "life expectancy" of those items sensitive to fatigue (i.e., piping, electrical, and mechanical equipment). Earthquake cycles are considered in the fatigue evaluation of the ASME Code, Section III, Class 1, 2, and 3. Components and Core Support Structures (Reference 3.7-11) (when required by the ASME Code) are discussed further in Sections 3.9 and 3.12, and in Section 3.10 for qualification testing of equipment. For fatigue evaluations, based on the OBE defined as less than or equal to 1/3 of the SSE, the guidance for determining the number of earthquake cycles for use in fatigue calculations is the same as the guidance provided in the U.S. NRC Staff Requirements Memorandum SECY-93-087 (Reference 3.7-12) for piping systems. [*The number of earthquake cycles to consider is two SSE events with 10 maximum stress cycles per event. Alternatively, the number of fractional vibratory cycles equivalent to that of 20 full SSE vibratory cycles may be used (but with an amplitude not less than 1/3 of the maximum SSE amplitude) when derived in accordance with Institute of Electrical and Electronic Engineers (IEEE), Standard 344-2004, Appendix D (Reference 3.7-13).*]* MIC-04-03-00016

Design Ground Motion Time History

A set of three statistically independent artificial ground motion time histories is generated in accordance with guidance of SRP 3.7.1 (Reference 3.7-10), Subsection 3.7.1.II.1B, Option 1 Approach 1, for use in US-APWR standard plant seismic analysis. These time histories represent ground motion for the three orthogonal directions, two horizontal ("H1" in the north-south [NS] direction, and "H2" in the east-west [EW] direction) and one vertical ("V"). Five additional sets of artificial ground motion time histories are developed as described in Section 3.8.5.5.2 to address sliding.

SRP 3.7.1 (Reference 3.7-10), Subsection 3.7.1.II SRP Acceptance Criteria 1B, Option 1 Approach 1 provides methodology used to generate a design basis time history with three components compatible with the CSDRS from seed recorded earthquake ground motions. The seed used to develop the design basis time history is a segment including the strong motion portion of the BAL (Mount Baldy, CA) recordings, i.e., the January 17th, 1994, Magnitude 6.7 Northridge Earthquake, obtained from the Pacific Earthquake Engineering Research (PEER) Center's digital ground motion library (Reference 3.7-56) recorded at the Mt. Baldy Station.

The BAL recordings of the Northridge earthquake are selected because they have the required durations and correlations (statistical independence among the three components) and because their spectral shapes, when scaled, are a reasonably good match to the CSDRS in the 2-20 Hz range for all three orthogonal components. The

shows the rise time, strong motion duration, and decay time of each component. These values are computed based on the definition of strong motion duration in SRP 3.7.1, using the normalized Arias Intensity (AI). Figure 3.7.1-13 shows the normalized AI plots of cumulative energy for each component. The time history components show an initial time interval of gradual energy buildup, followed by a ramp of rapid energy accumulation, and then followed by a gradual tapering of energy accumulation. The strong motion duration should be at least six seconds according to SRP 3.7.1 and in compliance with duration criteria for earthquake magnitude and distance bins listed in Table 3.7.1-4. The strong motion durations of the design basis time history satisfy both duration criteria.

Table 3.7.1-3 also shows the V/A and AD/V^2 ratios for mean ratios ± one standard deviation for the earthquakes of magnitude bins of **M**6.5+ with distance bins from 10 to 100 km, using data provided in Table 3-6 of NUREG/CR-6728 (Reference 3.7-14). [*The V/A and AD/V^2 ratios of the design basis time histories are within the limits in Table 3.7.1-3.*]* MIC-04-03-00016

Figure 3.7.1-6 through Figure 3.7.1-8 graphically demonstrate that the response spectra derived from the design basis time histories are developed in accordance with SRP 3.7.1 Option 1, Approach 1, for time history components 180 (H1), 090 (H2), and Vertical (UP), respectively. The response spectra of each component envelopes the CSDRS at 2%, 3%, 5%, 7%, and 10% damping values.

Figure 3.7.1-10 through Figure 3.7.12 show that the smoothed PSDs of the design basis time histories are greater than 80% of the horizontal and vertical target PSDs at all frequencies between 0.3 Hz and 50 Hz, for the three time history components.

Adequate representation of the Fourier components at low frequency is achieved by ensuring the artificial time history matches the CSDRS at all damping values and meets the PSD targets. As demonstrated above, the time histories developed from the Northridge Mt. Baldy seeds satisfy all the requirements described in the Option 1, Approach 1 of SRP 3.7.1 (Reference 3.7-10).

For site-specific design, the applicant will develop ground motion time histories that are compatible with the site-specific FIRS. The COL Applicant is to verify that the site-specific ratios *V/A* and *AD/V^2* (*A, V, D*, are PGA, ground velocity, and ground displacement, respectively) are consistent with characteristic values for the magnitude and distance of the appropriate controlling events defining the site-specific uniform hazard response spectra. These parameters are examined to assure that they are consistent with the values determined for the low and high frequency events described in Appendix D of RG 1.208 (Reference 3.7-3).

The COL Applicant is to provide site-specific design ground motion time histories and durations of motion.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

The site response analyses use very low values for the material damping of hard base rock in order to model the low dissipation of energy in the deep hard rock strata. In order to improve the numerical stability of SSI results, the damping of the base rock material when included in the site profile is set to a low nominal value of 0.1%. This modification does not affect the SSI response because, unlike in the site response analyses, the thickness of the modeled hard rock strata in the SSI site model has a finite thickness so the use of higher damping values realistically projects the actual dissipation of energy in the base rock.

[*In the dynamic FE models used for frequency domain SSI analyses, the damping values listed in Table 3.7.2-3 are assigned both to the shear wave and compression wave damping coefficients representing the dissipation of energy in the different types of structural members.*]* The damping values assigned to the structural model are consistent with the critical damping values specified in RG 1.61 (Reference 3.7-15) for elastic modal dynamic seismic analysis where energy dissipation is accounted for by frequency dependent viscous damping proportional to the velocity of the dynamic system. The implemented modeling approach results in the same amplitude of peak resonance responses for structures with viscous damping and hysteretic damping with less dissipation of energy occurring at other frequencies for the models with frequency independent hysteretic damping. MIC-04-03-00016

Two levels of stiffness and damping are developed and assigned to structural models used for seismic response analyses in order to capture structural stiffness and damping variations caused by concrete cracking: (1) full stiffness (uncracked concrete) corresponding to low stress levels; and (2) reduced stiffness (cracked concrete) corresponding to high stress levels.

In accordance with RG 1.61 (Reference 3.7-15) guidance and associated stress levels and industry standards, OBE structural damping values are used with the full stiffness (uncracked concrete) and SSE structural damping values are used with the reduced stiffness (cracked concrete). CIS and PCCV stiffness and damping are based on loading conditions as described in Section 3.7.2.3.5.

OBE structural damping values shown in Table 3.7.3-1(b) are for reinforced concrete, prestressed concrete and steel concrete modules assigned to the full stiffness (uncracked) model to calculate the effects from lesser dissipation of energy in the structures when they are subjected to low stress levels. SSE structural damping values shown in Table 3.7.3-1(a) are for reinforced concrete, prestressed concrete and steel concrete modules assigned to the reduced stiffness (cracked concrete) model to calculate the effects of greater dissipation of energy in the structures when they are subjected to higher stress levels.

The COL Applicant is to review the resulting level of seismic response and determine appropriate damping values for the site-specific calculations of ISRS that serve as input for the seismic analysis of seismic category I and seismic category II subsystems.

[*The damping coefficient values in Table 3.7.2-3 are assigned to the models used for the response spectra analyses to quantify the dissipation energy associated with the two bounding levels of stiffness.*]* Unlike in the frequency domain SSI analyses where different values can be assigned to different finite elements, in the response spectra MIC-04-03-00016

analysis and modal superposition time history analysis only a single value of critical damping is used to represent the dissipation of energy in the whole dynamic system.

[*The damping values for response spectra and modal superposition time history analyses of systems that include two or more substructures, such as a concrete and steel composite structure, may also be obtained using the strain energy method. This is the same as the stiffness weighted composite modal damping method as provided in to SRP 3.7.2* (Reference 3.7-16).]* MIC-04-03-00016

The stiffness weighted modal damping ratio h_j of the j^{th} mode is obtained from the following equation:

$$h_j = \frac{\vec{\phi}_j^{\,T}\left[\overline{K}\right]\vec{\phi}_j}{\vec{\phi}_j^{\,T}\left[K\right]\vec{\phi}_j}$$

where

$[K]$ = the stiffness matrix of the combined soil-structure system

$\vec{\phi}_j$ = the j^{th} normalized mode shape vector

$\left[\overline{K}\right] = \sum [k_i] \cdot \xi_i$ = the modified stiffness matrix constructed from the products of the element stiffness matrices $[k_i]$ and the applicable damping ratio ξ_i

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.1.3 Supporting Media for Seismic Category I Structures

A range of soil parameters of the basemat supporting media are considered in the seismic design of seismic category I building structures for the US-APWR standard plant. [*The R/B complex is approximately 336 ft 4 in. in the north-south (NS) direction and 409 ft 8 in. in the east-west (EW) direction. The total footprint area is 127,016 ft^2. The nominal bottom elevation is -39 ft 8 in. Embedment depth is approximately 42 feet from grade which is at 2 ft 7 in. The basemat is nominally 13 ft 4 in. thick, however it is 30 ft 6 in. thick under the PCCV and 43 ft 3 in. thick under the CIS.*]* See the figures in Section 1.2 for detailed elevation and plan views of the structure. MIC-04-03-00016

The minimum allowable static bearing capacity for the R/B complex is 15 ksf. The minimum allowable dynamic bearing capacity for the R/B complex is 35 ksf. These values are developed in Subsection 3.8.5.4.1. The dynamic bearing loads for seismic category I structure basemats are dependent upon the magnitude of the seismic loads that can be obtained from a site-specific seismic analysis that considers FIRS. The COL Applicant is

design that envelops the seismic demands at a majority of candidate sites within the CEUS.

The generic backfill properties used in the SSI and SSSI analyses for the standard plant are discussed in Subsection 3.7.2.4.

The COL Applicant is to implement regulatory guidance in Regulatory Guide (RG) 1.208 and DC/COL-ISG-17 for developing the site specific strain-compatible soil profiles and input control motions used for the site-specific SSI analysis. The site-specific SSI analyses will use site-specific input soil/rock properties that are compatible to the site-specific ground motion compatible to site-specific FIRS discussed in Subsection 3.7.1.1. The primary non-linear material behavior of the soil must be considered and may be approximated by using equivalent linear material properties that are compatible to the free-field strains generated by the site-specific design ground motion. The strain-compatible soil properties are obtained from a 1-dimensional wave propagation analysis by using equivalent-linear methodology and site-specific soil stiffness and damping degradation curves. DCD_03.07.01-44

The site-independent SSI analyses include the subgrade as horizontally infinite layers resting on the surface of an elasto-viscous half-space, representing the stiffness, material, and damping of geological hard rock stratum. The soil material damping values used in conjunction with the shear and compression wave profiles in the SSI analysis models are identical. The seismic models used in the SSI analyses are discussed further in Section 3.7.2.3. The site-independent SSI analyses are discussed further in Section 3.7.2.4, as well as the suggested methodologies for analyzing the effect of site-specific conditions on the SSI response.

Site response analyses using the equivalent linear Random Vibration Theory (RVT) approach described in MUAP-10006 (Reference 3.7-48) are performed to develop the CSDRS strain-compatible soil properties used as input for the SSI analyses. The site response analyses to develop the strain-compatible properties use the point-source model to generate both the input horizontal and vertical motions. A Magnitude **M**7.5 earthquake is used since its broad spectral shape is consistent with that of the CSDRS. A smaller magnitude would result in higher short period motions and higher strains. Distances to the **M**7.5 control earthquake are adjusted such that the median spectrum as full column outcrop spectrum at foundation level computed for each profile approaches, but does not exceed, the horizontal and vertical CSDRS. The distances and median estimates of the horizontal and vertical peak accelerations are listed in Table 3.7.1-7 and the median spectrum computed for each profile is compared to the CSDRS as described in MUAP-10006 (Reference 3.7-48).

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2 Seismic System Analysis

Seismic system analysis is discussed in the following Subsections, 3.7.2.1 through 3.7.2.15. Following the guidance of the acceptance criteria in section II.3(a) of SRP 3.7.2 (Reference 3.7-16), two categories of seismic category I SSCs are defined: (1) seismic

exchangers, valves, and instrumentation tubing and tubing supports. The seismic analysis of mechanical subsystems is addressed in Sections 3.9 and 3.12. The mass inertia properties of the major civil structural, mechanical, and all other seismic subsystems are addressed in the seismic system analyses, as explained further in Subsection 3.7.2.3.

3.7.2.1 Seismic Analysis Methods

[*The methods used for the seismic analysis of the US-APWR seismic category I systems conform to the requirements of SRP Subsections 3.7.1 (Reference 3.7-10) and 3.7.2 (Reference 3.7-16)*]*. Table 3.7.2-1, as updated by the COL Applicant to include site-specific seismic category I structures, presents a summary of dynamic analysis and combination techniques including types of models and computer programs used, seismic analysis methods, and method of combination for the three directional components for the seismic analysis of the US-APWR standard plant seismic category I buildings and structures. MIC-04-03-00016

Seismic Response SSE Analysis Methodology

The seismic design of US-APWR standard plant is based on responses obtained from time history analyses performed using the SASSI computer program (Reference 3.7-17). The program uses the substructuring method to account for the interaction of the structure with the subgrade consisting of horizontally infinite layers overlaying a uniform half-space. For that purpose, the near field zone of the SSI system is partitioned in two substructures, the building superstructure and the basement minus the excavated soil. The dynamic properties are represented using the following complex frequency dependent stiffness matrix, $C(\omega)$, formulation:

$$C(\omega) = K - 2 \cdot i \cdot D \cdot K - \omega^2 M$$

where, ω is frequency of vibration $i = \sqrt{-1}$ is the complex number and K, M and D are stiffness, mass and linear hysteric damping matrices, respectively. The global complex stiffness matrix are assembled from the element complex stiffness matrices that are developed using FE technique.

The seismic response of the near field zone is obtained from the solution for the following complex matrix equation of motion in frequency domain:

$$\begin{bmatrix} C_{SS}(\omega) & C_{SI}(\omega) \\ C_{IS}(\omega) & (C_{II}(\omega) - C_{FF}(\omega) + X_{FF}(\omega)) \end{bmatrix} \cdot \begin{bmatrix} u_S(\omega) \\ u'_F(\omega) \end{bmatrix} = \begin{bmatrix} 0 \\ X_{FF}(\omega) \cdot u'_F(\omega) \end{bmatrix}$$

The subscripts S, I and F in the above matrix equations refer to the degrees of freedom associated with the building, basement and excavated soil. $u(\omega)$ are the vectors of complex nodal point displacements of the structure.

size. The wave passage frequency is the maximum wave frequency that the soil layer can accurately transmit. It is determined using the Equation below (Reference 3.7-17):

$$f_{pass} = \frac{V_s}{5 \cdot d}$$

where V_s is the shear wave velocity of the soil and d is either the thickness of the soil layer or the maximum size of the FE mesh of the structural model at the SSI interface or the excavated soil volume mesh size.

Based on the calculated wave passage frequencies for each generic soil profile, the cut-off frequencies in the analyses are set to 40 Hz for 270-200 and 270-500 soil profiles, and 50 Hz for 560-500, 900-100, 900-200 and 2032-100 soil profiles.

Based on the maximum frequencies and intervals of frequency points, for SSI analysis, a total of 132 frequencies are analyzed for soil profiles 270-200 and 270-500, and a total of 152 frequencies are analyzed for soil profiles 560-500, 900-100, 900-200 and 2032-100.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2.2 Natural Frequencies and Responses

Table 3.7.2-4 presents a summary of the fixed base dynamic properties of R/B Complex Category I structures that are obtained from the ANSYS modal analysis. These are correlated with ACS SASSI analysis of R/B Complex Dynamic FE Model used for the site-independent SSI analyses presented in subsection 3.7.2. The natural frequencies, periods and effective masses of the dominant fixed base modes of vibration are provided for the R/B, the PCCV, the CIS and the east and west PS/Bs. Part 2 of Technical Report MUAP-10006 (Reference 3.7-48) provides comparisons and plots of the dominant mode shapes for each of the R/B Complex structures.

The seismic design of the US-APWR standard plant is based on responses obtained from a set of twelve (12) SSI analyses performed for the six generic site profiles of dynamic soil/rock properties presented in subsection 3.7.1.3 and the two levels of structural stiffness and damping properties (i.e. cracked and uncracked conditions) are described in subsection 3.7.2.3.

Amplitudes of the acceleration transfer functions are calculated from each SSI analysis for the response of the R/B Complex at the center of containment at the bottom of the foundation. The SSI responses for the generic site conditions are identified by comparing these transfer functions peak frequencies as described in Section 03.4.1.1 of Technical Report MUAP-10006 (Reference 3.7-48). These comparisons show that the site-independent SSI analyses provide a range of SSI responses of the R/B complex that envelope the possible responses of the building at a number of candidate sites.

The analyses of the generic soil profiles 270-200, 270-500, 560-500 provide seismic responses that are dominated by SSI effects and the dynamic characteristics of the

dynamic model is a simplified, coarsely meshed model that is validated against a more refined, detailed model. The translation process is described in the following steps:

Step 1: Develop the R/B Complex Dynamic FE Model

ANSYS Workbench and ANSYS Parametric Design Language (APDL) are used to develop an integrated 3-D FE model that includes the R/B, PCCV, CIS, A/B, East and West PS/Bs, and ESWPC coupled with the model representing the dynamic properties of the RCL. The numbering of the nodes is adjusted following the guidelines of the SASSI manual in order to optimize the computational effort.

Step 2: Validate the R/B Complex Dynamic FE Model to ensure that the model adequately captures the dynamic behavior of the structures

The Dynamic FE model is separated into six parts for the purpose of validation: R/B-FH/A, PCCV, CIS (with RCL), A/B, East PS/B, and West PS/B. The ESWPC is split and included in the R/B-FH/A, East PS/B, and West PS/B models. Static, modal, harmonic response, and stiffness analyses using ANSYS solvers are performed on each of the six parts of the dynamic model by establishing fixed boundary conditions at the base of each structure. An identical set of fixed base analyses are also performed on detailed FE models of each structure. The results obtained from the dynamic and detailed models are compared to demonstrate the ability of the less refined dynamic models to adequately capture the dynamic behavior of the corresponding detailed models. After all six parts are validated independently; the same process is used to validate the combined Dynamic FE model.

Step 3: Translate the Dynamic FE Model into SASSI format and verify the accuracy of the translation

The translator built into the SASSI code serves as the platform for the translation of the Dynamic FE model from ANSYS to SASSI house module format. In order to validate the translation of the model, a validation SSI analysis is performed on the SASSI Dynamic FE model resting on a very stiff elastic half space. The dynamic properties of the model, revealed by the resulting ATFs at selected locations, are compared to the fixed base dynamic properties and responses obtained from ANSYS modal analyses to ensure the translation is completed correctly.

[*The R/B complex Dynamic FE model consists of beam, shell, solid, and spring elements.*]* The use of finite elements provides an accurate representation of the dynamic properties of the structures and the foundation that enables an accurate modeling of dynamic interaction with the flexible foundation and the surrounding soil. Shell elements are used to model the reinforced concrete shear walls and slabs. Three-dimensional (3-D) beam elements model the reinforced concrete or steel columns and beams. Solid elements are used to model the basemat foundation and the massive structural members of the CIS. Spring and beam elements are used to model the MIC-04-03-00016

- ESWPT (seismic category I)
- UHSRS (seismic category I)

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2.3.2 R/B Complex Dynamic Finite Element Model

MIC-04-03-00003

Technical Report MUAP-10006 (Reference 3.7-478) presents a detailed discussion of the approach taken for development and validation of the R/B complex FE model. MIC-04-03-00019

[*The R/B complex Dynamic FE model is an integrated 3-D model of the R/B, PCCV, CIS, East and West PS/B, A/B, and ESWPC structures sharing common shear walls and resting on top of a common 13'-4" to 43'-3" thick basemat.*]* Figure 3.7.2-1 shows an overview of the R/B complex model, while Figure 3.7.2-5 and Figure 3.7.2-6 reveal the interior structures with section views. Figure 3.7.2-7 through Figure 3.7.2-13 show the PCCV, CIS shell elements (excluding the RCL), CIS solid elements, CIS beam elements (excluding RCL), East PS/B with ESWPC, West PS/B with ESWPC, and A/B as individual structures, respectively. The global origin is located at the center of the PCCV and top of the basement with the X axis pointing north, Y axis pointing west, and Z axis pointing upward. Once the model is translated into SASSI format, the global coordinate system is rotated 180 degrees about the Z axis so that the X axis is pointing south and the Y axis pointing east. Typical element size in the basemat and the slabs is approximately 9 ft. The element mesh used in the dynamic model is selected to provide sufficient modeling to capture the dynamic properties of the structure. The validation discussed in Subsection 3.7.2.3.10 show that no further refinement of the Dynamic FE model is necessary. MIC-04-03-00016

The R/B complex Dynamic FE model is developed incrementally using ANSYS in the following seven steps:

Step 1. R/B complex structures geometry is created in a manner that allows control of the model FE mesh.

Step 2. Attributes are assigned and additional masses are applied on each of the structures.

Step 3. Mesh controls are set and the model, excluding the RCL, is meshed.

Step 4. Modifications are implemented as needed to make the model more consistent with the Detailed FE model.

Step 5. The nodes are renumbered sequentially in the order of their X, Y, and Z coordinates as recommended by the SASSI Manual in order to enhance computational efficiency.

Step 6. The model used for ANSYS analyses of RCL is translated into a format that can be translated into SASSI.

to be used for seismic analyses. Therefore, the polar crane is modeled to approximate the design weight.

The requirements of NOG-1 (Reference 3.7-22) require that the crane design analyses be performed by coupling the crane models with the building models. The PCCV polar crane and R/B fuel handling crane are procured on a site-specific basis. It is the responsibility of the COL Applicant to confirm the masses and frequencies of the PCCV polar crane and fuel handling crane and to determine if coupled site-specific analyses are required. If found that this is required, the site-specific seismic analysis of the US-APWR standard plant must be performed on models that incorporate the PCCV polar crane and the fuel handling crane, as appropriate in the site-specific SSI analyses and site-specific crane analyses.

The CIS portion of the Dynamic FE model, excluding the Reactor Coolant Loop (RCL), contains approximately 4,631 elements and 3,876 nodes with nominal mesh size of 7.2 ft in the vertical direction and 9 ft in the horizontal direction. It consists of a combination of shell, solid and beam elements. The solid elements shown in Figure 3.7.2-1 make up the CIS base which starts at elevation 2'-7" and the reactor support which extends up to elevation 35'-10.87". The shell elements make up the remaining walls and slabs of the structure and begin at the same elevation as the CIS solid elements, but extend to the top of the pressurizer compartment at elevation 139'-6". The beam elements shown in Figure 3.7.2-10 represent the steel frames and the supports for the RCL components.

The lumped mass stick model used for dynamic analyses of the RCL includes several parts representing the dynamic properties of the Nuclear Steam Supply System (NSSS) components and the main coolant piping. Appendix 3C discusses the RCL model.

The model of the RCL and major pipe components used for seismic analyses of the NSSS are translated into elements acceptable to SASSI format and then coupled with the dynamic CIS model. The translation included changes of ANSYS modeling features such as pipe element types, rigid links and constraint equations that can be supported by the SASSI translator. The pipe elements are replaced by 3-D beam elements with stiffness values equivalent to those of the straight and curved pipe sections. The rigid links and constraint equations are replaced by rigid beams. The coupling of the RCL to the CIS is accomplished such that there are no local effects from the CIS imparted upon the RCL. The validation of the model in Subsection 3.7.2.3.10 demonstrates that these modifications do not affect the overall stiffness of the model and thus the dynamic response of the RCL components.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2.3.3 Not Used

3.7.2.3.4 Subsystem Coupling Requirements

For purposes of modeling the R/B-PCCV-containment internal structure on their common basemat, large seismic subsystems contained within these structures are evaluated

against the mass and frequency ratio criteria given in SRP 3.7.2, Section II.3(b) (Reference 3.7-16), as follows:

- If $R_m < 0.01$, decoupling can be done for any R_f
- If $0.01 \le R_m$ and ≤ 0.1, decoupling can be done if $0.8 \ge R_f \ge 1.25$
- If $R_m > 0.1$, a subsystem model should be included in the primary system model

where

R_m = (total mass of supported subsystem)/(total mass of supporting system)

R_f = (fundamental frequency of supported system)/(dominant frequency of support motion)

If these criteria require the subsystem to be coupled with the primary seismic model, both the stiffness and the mass of the subsystem are included in the overall model to assure the accuracy of the calculated frequencies. This is the approach used for integrating the RCL seismic subsystem with the R/B complex dynamic FE model discussed in Technical Report MUAP-10006 (Reference 3.7-48). To account for the effects of dynamic coupling of the containment internal structure with the equipment and the piping, the dynamic FE model of the R/B complex also includes a lumped mass stick model of the RCL representing the stiffness and mass inertia properties of the major equipment and piping located in the PCCV. Spring elements are used to model the stiffness of the supports of the components and piping. The lumped mass stick model of the RCL and major piping components used for seismic analyses of nuclear steam supply system are translated into an acceptable ACS SASSI format and then coupled with the dynamic containment internal structure model.

When it has been determined through investigation of the above criteria that a subsystem is not required to be coupled with the primary seismic model, then the subsystem is assumed absolutely rigid and only its mass is included at appropriate node points of the global seismic model.

3.7.2.3.5 Section and Material Properties

The values of the modulus of elasticity and Poisson's ratio (ν) for concrete and steel used in the dynamic models are discussed below. The values are for materials at or near ambient temperatures.

a. Concrete

[*The concrete modulus of elasticity E_c, and shear modulus G_c corresponding to the compressive strengths of normal weight concrete used in the R/B, PCCV, and containment internal structure and their common basemat are summarized in Table 3.7.2-2 and are computed as follows:* MIC-04-03-00016

$$E_c\ (psi) = 57{,}000\ \sqrt{f'_c}$$

G_c *(psi)=* $E_c / 2 (1 + \nu_c)$]* MIC-04-03-00016

where

f'_c = specified 28-day compressive strength of concrete (psi)

ν_c = 0.17 (Poisson's ratio for concrete)

b. Steel

[*The properties of ferritic structural steel and non-prestressed reinforcement: Young's modulus of elasticity* E_s *and Poisson's ratio for steel* ν_s *are as follows:* MIC-04-03-00016

E_s = *29,000 ksi and* $\nu_s = 0.3$]*

Effects of Concrete Cracking on Reinforced Concrete Structures

Reinforced concrete structures include the R/B, East and West PS/Bs, A/B and ESWPC. In accordance with ASCE 4-98 (Reference 3.7-9), Section 3.1.3, traditional reinforced concrete members and elements are to be modeled as either cracked or uncracked sections. For the uncracked sections/elements, the stiffness is directly obtained from the concrete linear elastic properties and the section or element geometric dimensions. For the cracked concrete, a reduction to the uncracked concrete stiffness included. A 50% reduced value of the concrete modulus of elasticity is used in linear elastic analysis to address the effects of concrete cracking on the seismic response.

The design of the reinforced concrete structures is based on the ultimate capacity of the reinforced concrete sections. Therefore, the design of reinforced concrete members addresses code stress limits corresponding to reduced cracked concrete stiffness properties and higher SSE material damping levels as discussed in Section 1.2 of RG 1.61 (Reference 3.7-15). However, there is a possibility that the response of the structure under lower stress levels at certain frequency ranges will be higher than the response corresponding to the higher stress state under cracked conditions. In order to ensure that the structural integrity and functionality of the components and the equipment is not compromised under seismic loading conditions, the development of ISRS and seismic loads and displacement also considers the responses of the reinforced concrete structure with full (uncracked concrete) stiffness properties and lower OBE damping levels.

[*The seismic response analyses of reinforced concrete structures consider two stiffness and damping values in order to address the possible variations in the extent of concrete cracking:* MIC-04-03-00016

1. *Full stiffness representing low stress levels corresponding to uncracked concrete properties where the stiffness of the members are represented by gross cross sectional properties.*

2. *Reduced stiffness representing higher stress levels resulting in cracking of the concrete where the stiffness of the members are reduced in accordance with guidelines provided in Table 3-1 of ASCE/SEI 43-05. The stiffness of the composite members made of reinforced concrete and steel beams, such as the*

walls and the roof of Fuel Handling Area (FH/A), are also reduced accordingly to represent 50% reduction in stiffness in the reinforced concrete part of the composite sections. MIC-04-03-00016

The structural material damping values used for these two different stress levels are OBE damping of 4% for the full (uncracked concrete) stiffness condition and SSE damping of 7% for the reduced (cracked concrete) stiffness condition, are obtained from RG 1.61 (Reference 3.7-15) and are shownin Table 3.7.2-3.]*

Effects of Concrete Cracking on the CIS

The CIS is comprised of different types of structural members including composite SC walls, massive reinforced concrete sections, and reinforced concrete slabs. The members can experience varying levels of stress resulting in different patterns of concrete cracking under the different loading conditions that can occur. Depending on the plant conditions, the CIS members can be subjected to design seismic loads in combination with normal operating or design basis accidental thermal loads resulting in different levels of stiffness reduction due to concrete cracking. [*Table 3.8.3-4 shows the summary of CIS stiffness and damping considered during seismic analysis. The CIS members are classified in six categories, two stiffness levels corresponding to:* MIC-04-03-00016

1. *Loading Condition A: (SSE Seismic, plus operating temperatures): conditions characterized with insignificant reduction of stiffness and concrete cracking; and;*

2. *Loading Condition B: (SSE Seismic, plus accident temperatures): conditions characterized with significant reduction of stiffness due to cracking of the concrete under high design basis accidental thermal loads and SSE seismic.*

Different material damping values are assigned to the different members depending on the level of stresses and corresponding concrete cracking.]*

Effects of Concrete Cracking on the PCCV

Similar to the CIS, the level of stress in the PCCV during a seismic design event depends on the plant conditions. The design of the PCCV structure is based on the premise that during normal operating conditions the pre-stressed concrete cross sections remain in compression. During the normal operating conditions, the earthquake design loads can cause only limited cracking having insignificant effect on the overall stiffness of the PCCV. Accordingly, the dissipation of energy due to material damping of the PCCV structure under normal operating conditions is low. The accident loading conditions include high temperatures and pressure loads in the reactor containment that can generate high stresses in the pre-stressed concrete accompanied with cracking that can result in a reduction of the global stiffness of the PCCV structure and higher dissipation of energy due to the material damping. The stress evaluations provided in Appendix 2-A of MUAP-10006 (Reference 3.7-48), indicate that the reduction of the overall stiffness of PCCV structure under seismic design loads in combination with accident loads can be up to 50%.

[*Two stiffness levels are considered for the seismic response analyses of PCCV:* MIC-04-03-00016

1. *Normal operating conditions corresponding to insignificant concrete cracking and full (uncracked concrete) stiffness of the pre-stressed concrete structure, using 3% damping, and;*

2. *Accident conditions when the high thermal and pressure loads generate high stresses that can result in significant cracking of the pre-stressed concrete and a 50% reduction of the stiffness, using 5% damping.*

The structural material damping values used for these two different stiffness and stress levels are also provided in Table 3.7.2-3.]*

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

3.7.2.3.6 Modeling of Mass

The mass included in the R/B complex Dynamic FE model includes contributions from the structural mass in addition to that of equipment, dead loads, and live loads.

Generally, the structural mass is assigned as a density to the finite elements based on the material properties of the components of the structures. The density is then increased to account for equipment, live, snow and other applicable loads. A mass equivalent to 25% of floor design live load and 75% of roof design snow load, as applicable, is included in the model in accordance with SRP 3.7.2 Acceptance Criteria II.1.D (Reference 3.7-17). Each load is applied over a particular area and the density of the elements in that area is increased such that the total increase in mass matches the mass of the applied loads.

Equipment load also includes a 50 psf dead load to account for miscellaneous pipe, minor equipment, and raceway loads applied on slabs in the R/B complex model, with the exception of a few locations where a heavier pipe load is used instead (e.g., main steam and feedwater pipe).

The above process is not applicable for the NSSS and major pipe that constitutes the RCL. The RCL dynamic mass is included directly in the RCL model.

The mass is applied to the Dynamic FE model in two steps. First, a mass density equal to the sum of the structural self-weight and pipe load is calculated and assigned to each of the shell elements modeling the R/B complex slabs. Where mass is carried by grating not explicitly modeled, the total mass supported is evenly distributed on the supporting walls and slabs.The remaining loads are applied as either additional mass densities on slab shell elements or concentrated lumped masses on wall and slab key points.

The density and thickness of the elements are further modified to account for stiffness reductions due to minor openings and cracking, but it is done in such a way as to not change the mass of the elements. Refer to Subsection 3.7.2.3.2 for further discussion.

The PCCV Polar Crane and Fuel Handling cranes are modeled in their respective parked locations with trolley masses and lifted load masses included.

The three components of the earthquake are applied on the seismic model separately in ACS SASSI (Reference 3.7-17) for obtaining the maximum accelerations of the response in the three orthogonal directions. [*The maximum responses of interest of SSCs obtained from the responses of each of the three components of motion are then combined using SRSS in accordance with RG 1.92, Rev.2*]* (Reference 3.7-27). The combined maximum accelerations, obtained through the process described previously in Subsection 3.7.2, are then used as basis for development of the SSE loads used for the design of structural members, components and connections of US-APWR standard plant. These SSE design loads are applied as static loads on the detailed FE model in conjunction with other design loads and load combinations. MIC-04-03-00016

The development of the ISRS uses the SRSS method to combine the responses from the three components of the earthquake motion.

Although the above approach has been used for seismic analysis of the major seismic category I structures, seismic responses of other seismic systems and subsystems due to the three components of earthquake motion can be combined using any one of the following methods in accordance with RG 1.92, Rev.2 (Reference 3.7-27):

i. The peak responses due to the three earthquake components from the response spectra and equivalent static analyses are combined using the SRSS method.

ii. The peak responses due to the three earthquake components are combined directly, using the Newmark combination method that assumes that when the peak response from one component occurs, the responses from the other two components are 40% of the peak (100%-40%-40% method). Combinations of seismic responses from the three earthquake components, together with variations in sign (plus or minus) are considered.

iii. The time-history of the responses from the three earthquake components that are applied simultaneously can be combined algebraically at each time step to obtain the combined response time-history. The design seismic loads are selected from the maximum values or the most critical combination of values extracted from the time history results representing the responses directly related to the design of the particular element considering sign reversals, such as the relevant internal forces or stresses in the element.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2.7 Combination of Modal Responses

As previously discussed, the seismic responses of the seismic category I building models are obtained using three-dimensional SSI models with the program ACS SASSI (Reference 3.7-17). ACS SASSI utilizes time history analysis in the frequency domain in which the equations of motion are solved using a global complex matrix that is assembled from the complex matrices for the soil and structural elements. Therefore modal combination is not utilized.

When the modal superposition time history analyses or response spectra analyses are used for seismic design of other seismic category I and seismic category II systems and subsystems, it may not be practical to capture higher frequency modes that are not excited by the input motion. In modal superposition, only modes with frequencies less than the frequencies defining the cutoff or ZPA response participate in the modal solution. The modal contribution of the residual rigid response for modes with frequencies greater than the cutoff or ZPA frequency is accounted for by using the missing mass method. As permitted in Section 1.4.1 of RG 1.92 (Reference 3.7-27), the missing mass contribution, scaled to the instantaneous input acceleration, is treated as an additional mode in the algebraic summation of modal responses at each time step. The missing mass contribution is considered for all DOF. When using the Lindley-Yow method in response spectra analyses, the missing mass may be captured using the Static ZPA method as described in Section 1.4.2 of RG 1.92, Rev. 2 (Reference 3.7-27).

When the response spectra method of analysis is used (see Subsection 3.7.3.1 for a discussion of response spectra methods of analysis), modal responses have been combined by one of the RG 1.92, Rev.2 (Reference 3.7-27), methods, or by the 10% grouping method described below. In some applications, the more conservative modal combination methods contained in Rev.1 of RG 1.92 (Reference 3.7-28) are also used, as permitted in Revision 2 of RG 1.92 (Reference 3.7-27).

[*For the grouping method, the total unidirectional seismic response for subsystems is obtained by combining the individual modal responses using the SRSS method for frequencies spaced more than 10%.* MIC-04-03-00016

For subsystems having modes with closely spaced frequencies, this method is modified to include the possible effect of these modes. The groups of closely spaced modes are chosen so that the differences between the frequencies of the first mode and the last mode in the group do not exceed 10% of the lower frequency.

The combined total response for systems having such closely spaced modal frequencies is obtained by adding to the SRSS of all modes the product of the responses of the modes in each group of closely spaced modes.

This can be represented mathematically as follows:

$$R^2 = \sum_{k=1}^{N} R_k{}^2 + \sum_{q=1}^{P}\sum_{l=i}^{j}\sum_{m=i}^{j}\left|R_{lq}\cdot R_{mq}\right| \qquad l \neq m$$ MIC-04-03-00016

where

R = *total unidirectional response*

R_k = *the peak value of the response due to the k^{th} mode*

R_{lq}, R_{mq} = *are the modal responses, R_l and R_m within the q^{th} group*

N = *total number of modes considered*

P = *number of groups of closely spaced modes*

i = *lowest modal number associated with group j of closely spaced modes*

j = *highest modal number associated with group j of closely spaced modes*

Alternatively, a more conservative ten percent grouping method can be used in the seismic response spectra analyses. The groups of closely spaced modes are chosen so that the difference between two frequencies (the first and last mode in a group) is no greater than 10%. Therefore,

$$R^2 = \sum_{k=1}^{N} R_k^{\ 2} + 2\sum \left| R_i R_j \right| \qquad i \neq j$$

The second summation is to be done on all i and j modes whose frequencies are closely spaced to each other.]*

All terms for the modal combination remain the same as defined above.

The 10% grouping method is more conservative than the grouping method because the same mode can appear in more than one group. [*The 10% grouping method is used for piping as described in Subsection 3.12.3.2.4.* MIC-04-03-00016

For the seismic response spectra analysis, the ZPA cut-off frequency is 50 Hz. High frequency or rigid modes must be considered using the static ZPA method, the left-out force method as described in Subsection 3.7.2.7 below, or the Kennedy Missing Mass method contained in Revision 2 of RG 1.92 (Reference 3.7-27).]*

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

3.7.2.7.1 Left-Out-Force Method (or Missing Mass Correction for High Frequency Modes)

The left-out-force method is based on the Left-Out-Force Theorem. This theorem states that for every time history load, there is a frequency, f_r, called the “rigid mode cutoff frequency” above which the response in modes with natural frequencies above f_r will very closely resemble the applied load at each instant of time. These modes are called “rigid modes.” The formulation follows and is based on the method used in the computer program PIPESTRESS (Reference 3.7-29). The left-out-force method is not used for seismic analysis of the major seismic category I structures; however, it may be used for other seismic category I and II systems and subsystems.

The left-out-force vector for time history analyses, { *Fr* }, is calculated based on lower modes:

$$\{ Fr \} = [\, 1 - \sum M e_j e_j^T \,] \, f(t)$$

where

$f(t) =$ the applied load vector

$M =$ the mass matrix

$e_j =$ the eigenvector

Note that ∑ only represents the flexible modes, not including the rigid modes.

In the response spectra analysis, the total inertia force contribution of higher modes can be interpreted as:

$$\{ Fr \} = A_m [M] [\{ r \} - \sum P_j e_j]$$

where

$A_m =$ the maximum spectral acceleration beyond the flexible modes

$[M] =$ the mass matrix

$\{ r \} =$ the influence vector or displacement vector due to unit displacement

$P_j =$ participation factor, where

$$P_j = e_j^T [M] \{ r \}, \ \{ Fr \} = A_m [M] \{ r \} [1 - \sum M e_j e_j^T]$$

In the response spectra analysis, the low frequency modes are combined by one of the modal combination methods in accordance with RG 1.92, Rev.2 (Reference 3.7-27) as discussed above. For each support level, there is a pseudo-load vector or left-out-force vector in the X, Y, and Z directions.

These left-out-force vectors are used to generate left-out-force solutions which are multiplied by a scalar amplitude equal to a magnification factor specified by the user. As an alternative the acceleration associated with a cutoff frequency can be used instead of the ZPA provided the number of modes chosen is such that the results of the analysis are within 10 percent of the results of an analysis that considers the additional number of modes. This factor is usually the ZPA of the response spectra for the corresponding direction. The resultant low frequency responses are combined by the SRSS with the high frequency responses (rigid modes results).

3.7.2.8 Interaction of Non-Seismic Category I Structures with Seismic Category I Structures

The locations of all major buildings within the power block are shown on the general arrangement drawings in Section 1.2.

[*Seismic category II structures have been analyzed for the same seismic loads and using the same seismic analysis methods described for seismic category I SSCs in Subsection 3.7.2.1 to verify that they will not collapse or adversely interfere with the standard plant* MIC-04-03-00016

*seismic category I R/B complex or adversely affect the MCR occupants.]** Seismic category II is defined in Section 3.2. By definition, seismic category II structures are designed to retain their position to the extent necessary to assure that they will not impact the function or integrity of seismic category I SSCs. MIC-04-03-00016

*[NS structures have been located such that, in case of their collapse or failure, they do not have the potential to impact seismic category I SSCs, either directly or indirectly.]** MIC-04-03-00016

Maximum lateral earth pressure due to the backfill, surcharge due to live load or adjacent basemat bearing pressures, groundwater, and other such static-load effects on below-grade exterior walls are discussed in Section 3.8. The design of below grade exterior walls for US-APWR seismic category I structures takes into account any dynamic increases of these loads due to a seismic event. This is accomplished through the use of conservative maximum static and dynamic lateral pressure distribution profiles developed using analysis methods provided in Section 3.5.3 of ASCE 4-98 (Reference 3.7-9) and as discussed in Subsection 3.8.4.

The COL Applicant is to assure that the design or location of any site-specific ~~seismic category I~~safety-related SSCs, for example pipe tunnels or duct banks, will not expose those SSCs to possible impact due to the failure or collapse of non-seismic category I structures, or with any other SSCs that could potentially impact, such as heavy haul route loads, transmission towers, non safety-related storage tanks, etc. Alternately, site-specific seismic category I SSCs may be designed for impact loads due to postulated failure of the non-seismic category I SSCs. MIC-04-03-00013

Following is a discussion of major structures in the power block area with respect to potential interaction with seismic category I structures.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

3.7.2.8.1 AC/B

The AC/B is designed as a NS structure on reinforced concrete foundation located approximately 16 inches from the west side of the A/B (seismic category II). If the AC/B were to fail or collapse, it could impact the A/B which is a seismic category II structure located on the R/B complex common basemat. The AC/B is smaller, shorter, and much less massive than the reinforced concrete A/B. In the unlikely event of impact, there would not be sufficient kinetic energy transfer to cause the A/B to displace beyond acceptable limits. Specifically, the A/B would not displace enough to impact the R/B or PS/Bs.

The design philosophy of the AC/B is stated as follows.

- The seismic design is in accordance with the International Building Code (Reference 3.7-30) with an Importance Factor of 1.0.

- The structure is designed in accordance with applicable building codes.

and can be damaged by high frequency exceedances of the design spectra. A test program is established to identify, evaluate, and qualify or eliminate such SSCs that are potentially sensitive to high frequency exceedances. The US-APWR seismic and dynamic equipment qualification test program for active components including valves, piping, and other plant SSCs is in accordance with IEEE Std 344-2004 (Reference 3.7-13) and is addressed in Section 3.10.

3.7.3.2 Procedures Used for Analytical Modeling

Seismic subsystems are defined as those systems that are not analyzed in conjunction with basemats and subgrade, as previously discussed in Subsection 3.7.2. The procedures used for analytical modeling of subsystems include the use of mathematical computer models comprised of nodes and elements used to represent connections and members. Depending on the complexity of the subsystem, the models may be lumped mass stick models or FE models. The models contain sufficient detail and DOFs to represent the structural and seismic response of the subsystem, and are incorporated into the overall building model when required by the coupling criteria discussed in Subsection 3.7.2.3.4. Depending on the complexity of the seismic subsystem, structure, or component being analyzed, detailed member design may be performed by hand calculations using the results of the overall building structural and seismic analyses. Alternatively, the computer model may be sufficiently detailed to be used for the design calculation of the individual members. In all cases, the computer programs used for analytical modeling of subsystems are verified and validated in accordance with ANSI/ASME NQA-1-2004 (Reference 3.7-23) requirements.

3.7.3.3 Analysis Procedure for Damping

Energy dissipation within a structural system is represented by equivalent viscous dampers in the mathematical model. The damping coefficients used are based on the material, load conditions, and type of construction used in the structural system. [*The SSE damping values to be used in the dynamic analysis for various seismic category I and II subsystems and their related supports are shown in Table 3.7.3-1(a).*]* The damping values are based on RG 1.61 (Reference 3.7-15). The damping value of conduit, empty cable trays, and their related supports is similar to that of a bolted structure, namely 7% of critical. The damping value of filled cable trays and supports increases with increased cable fill and level of seismic excitation. The use of higher damping values for cable trays with flexible support systems (e.g., rod-hung trapeze systems, strut-hung trapeze systems, and strut-type cantilever and braced cantilever support systems) is permissible, subject to obtaining NRC review for acceptance on a case-by-case basis. MIC-04-03-00016

For subsystems that are composed of different material types, the composite modal damping approach with either the weighted mass or stiffness method is used to determine the composite modal damping value. Alternately, the minimum damping value may be used for these systems.

Piping systems are analyzed for SSE using 4% damping. Alternatively, frequency-dependent damping values may be utilized as noted and described in Tables 3.7.3-1(a) and 3.7.3-1(b). The seismic analysis of piping and other mechanical subsystems is addressed in further detail in Sections 3.9 and 3.12.

For subsystems analyzed with the time history direct integration method, Rayleigh damping is used. The Rayleigh damping matrix of the system [C] proportional to the stiffness matrix [K] and mass matrix [M] is obtained as [C] = α [M] + β [K]. In order to model the dissipation of energy in the dynamic system in a conservative manner, the values of the coefficients α and β are adjusted to assure that the damping of the system in a selected range of dominant frequencies remains below the target values of critical damping ratios ξ_i. The selected damping ratio is in accordance with the requirements of RG 1.61. The dominant frequency range is selected considering the natural frequencies of the system being analyzed and the frequency content of the input seismic excitation.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2*. Any change to this information requires prior NRC approval. MIC-04-03-00016

3.7.3.4 Three Components of Earthquake Motion

For seismic category I subsystems, the three components of earthquake motion are considered in the same manner as described in Subsection 3.7.2.6.

Two horizontal components and one vertical component of seismic response spectra are employed as input to a modal response spectra analysis. The spectra are associated with the SSE. In the response spectra and equivalent static analyses, the effects of the three components of earthquake motion are combined using one of the following methods:

- The peak responses due to the three earthquake components from the response spectra analyses are combined using the SRSS method.

- The peak responses due to the three earthquake components are combined directly, using the assumption that when the peak response from one component occurs, the responses from the other two components are 40% of the peak (100%-40%-40% method). Combinations of seismic responses from the three earthquake components, together with variations in sign (plus or minus), are considered. This method is not used for piping systems.

3.7.3.5 Combination of Modal Responses

Where seismic subsystems are analyzed by the equivalent static load method of analysis, a combination of modal responses is not applicable. For this method of analysis, static load factors are applied to acceleration values, which are taken from the appropriate ISRS discussed in Subsection 3.7.2.5. The static load factors are chosen using the guideline of Reference 3.7-9 to be sufficiently conservative to capture multi-modal response effects.

For the response spectra method of analysis, the combination of modal responses is performed in the same manner as described in Subsection 3.7.2.7.

3.7.3.6 Use of Constant Vertical Static Factors

As discussed in Subsection 3.7.2.10, the plant design does not utilize constant vertical static factors in the seismic design.

COL 3.7(12) *It is the responsibility of the COL Applicant to design seismic category I below- or above-ground liquid-retaining metal tanks such that they are enclosed by a tornado/hurricane missile protecting concrete vault or wall, in order to confine the emergency gas turbine fuel supply.*

COL 3.7(13) *The COL Applicant is to set the value of the OBE that serves as the basis for defining the criteria for shutdown of the plant, according to the site specific conditions.*

COL 3.7(14) *The COL Applicant is to determine from the site-specific geological and seismological conditions if multiple US-APWR units at a site will have essentially the same seismic response, and based on that determination, choose if more than one unit is provided with seismic instrumentation at a multiple-unit site.*

COL 3.7(15) *Deleted*

COL 3.7(16) *The COL Applicant shall provide free-field seismic instrumentation in the vicinity of the power block area at surface grade which shall be used for shutdown determination, unless otherwise justified. Any such justification shall be based on conditions and requirements specific to the site, and shall include justification for evaluation of OBE exceedance using only measurements from instrumentation installed on the buildings and the structures of the US-APWR standard plant.*

COL 3.7(17) *Deleted*

COL 3.7(18) *Deleted*

COL 3.7(19) *The COL Applicant is to identify the implementation milestone for the seismic instrumentation implementation program based on the discussion in Subsections 3.7.4.1 through 3.7.4.5.*

COL 3.7(20) *The COL Applicant is to validate the site-independent seismic design of the standard plant for site-specific conditions, including geological, seismological, and geophysical characteristics, and to develop the site-specific GMRS, and foundation input response spectra (FIRS).* MIC-04-03-00014

COL 3.7(21) *The COL Applicant is responsible for the seismic design of those seismic category I and seismic category II SSCs that are not part of the US-APWR standard plant using site-specific SSE design ground motion.*

COL 3.7(22) *The COL Applicant may consider the seismic wave transmission incoherence of the input ground motion when performing the site-specific SSI analyses.*

COL 3.7(23) ~~*The COL Applicant is to verify that the results of the site-specific SSI analysis for the broadened ISRS are enveloped by the US-APWR standard design.*~~*The COL Applicant shall verify, for pipe and equipment within the standard plant structures, the site-specific ISRS, at specified locations, are enveloped by the corresponding Standard Plant ISRS as described in subsection 3.7.2.4.5.* DCD_03.07.03-12

COL 3.7(24) *The COL Applicant is to verify that the site-specific ratios V/A and AD/V^2 (A, V, D, are PGA, ground velocity, and ground displacement, respectively) are consistent with characteristic values for the magnitude and distance of the appropriate controlling events defining the site-specific uniform hazard response spectra.*

COL 3.7(25) *The COL Applicant referencing the US-APWR standard design is required to perform a site-specific SSI analysis for the R/B complex, utilizing a* ~~*SASSI*~~ *computer program such as ACS SASSI (Reference 3.7-17) which contains time history input incoherence function capability. The SSI analysis using SASSI is required in order to confirm that site-specific effects are enveloped by the standard design.* MIC-04-03-00014

COL 3.7(26) *SSI effects are also considered by the COL Applicant in site-specific seismic design of any seismic category I and II structures that are not included in the US-APWR standard plant. The site-specific SSI analysis is performed for buildings and structures including, but not limited to, to the following:*

- *Seismic category I ESWPT*
- *Seismic category I PSFSV*
- *Seismic category I UHSRS*

COL 3.7(27) *It is the responsibility of the COL Applicant to perform any site-specific seismic analysis for dams that may be required.*

COL 3.7(28) *Deleted.*

COL 3.7(29) *Table 3.7.2-1, as updated by the COL Applicant to include site-specific seismic category I structures, presents a summary of dynamic analysis and combination techniques including types of models and computer programs used, seismic analysis methods, and method of combination for the three directional components for the seismic analysis of the US-APWR standard plant seismic category I buildings and structures.*

COL 3.7(30) *The COL Applicant is to provide site-specific design ground motion time histories and durations of motion.*

COL 3.7(31) *The COL Applicant shall verify, for internal forces and ISRS, the site-specific ARS, at specified locations, are enveloped by the corresponding Standard Plant ARS for frequencies as described in Subsection 3.7.2.4.5.* DCD_03.07.03-12

3.7.6 References

3.7-1 General Design Criteria for Nuclear Power Plants, Domestic Licensing of Production and Utilization Facilities, Energy. Title 10 Code of Federal Regulations, Part 50, Appendix A, U.S. Nuclear Regulatory Commission, Washington, DC.

3.7-2 Deleted

3.7-3 A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion, Regulatory Guide 1.208, Rev. 0, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.7-4 Reactor Site Criteria, Energy. Title 10 Code of Federal Regulations Part 100, U.S. Nuclear Regulatory Commission, Washington, DC.

3.7-5 Standard Design Certifications, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Plants, Energy. Title 10 Code of Federal Regulations Part 52, Subpart B, U.S. Nuclear Regulatory Commission, Washington, DC.

3.7-6 Design Response Spectra for Seismic Design of Nuclear Power Plants. United States Nuclear Regulatory Commission, Regulatory Guide 1.60, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, December 1973.

3.7-7 Earthquake Engineering Criteria for Nuclear Power Plants, Domestic Licensing of Production and Utilization Facilities, Energy. Title 10 Code of Federal Regulations Part 50, Appendix S, Part IV(a)(1)(i), U.S. Nuclear Regulatory Commission, Washington, DC.

3.7-8 Vibratory Ground Motion, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG 0800, SRP 2.5.2, Rev. 4, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.7-9 Seismic Analysis of Safety-Related Nuclear Structures, American Society of Civil Engineers, ASCE 4-98, Reston, VA, 2000.

3.7-10 [*Seismic Design Parameters, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, SRP 3.7.1, Rev. 3, United States Nuclear Regulatory Commission, March 2007.*]* MIC-04-03-00016

3.7-11 Components and Core Support Structures, ASME Code, Section III, Class 1, 2, and 3, American Society of Mechanical Engineers, 2001 Edition thru 2003 Addenda.

3.7-12 United States Nuclear Regulatory Commission Staff Requirement Memorandum SECY-93-087, Policy, Technical, and Licensing Issues Pertaining to Evolutionary and Advanced Light-Water Reactor (ALWR) Designs, James M. Taylor, Executive Director of Operations, April 2, 1993.

3.7-13 [*IEEE Recommended Practice for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations, IEEE Std 344-2004, Institute of Electrical and Electronic Engineers Power Engineering Society, New York, New York, June 2005.*]* MIC-04-03-00016

3.7-14 McGuire, R.K., Silva, W.J., and Costantino, C.J. Technical Basis for Revision of Regulatory Guidance on Design Ground Motions: Hazard- and Risk-Consistent Ground Motion Spectra Guidelines, NUREG/CR-6728, U.S. Nuclear Regulatory Commission, Washington, DC, October 2001.

3.7-15 [*Damping Values for Seismic Design of Nuclear Power Plants, Regulatory Guide 1.61, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.*]* MIC-04-03-00016

3.7-16 [Seismic System Analysis, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, SRP 3.7.2, Rev. 3, United States Nuclear Regulatory Commission, March 2007.]*

3.7-17 ACS SASSI: Version 2.3.0 Including “Option A” & NQA “Option FS”, An Advanced Computational Software for 3D Dynamic Analysis including Soil-Structure Interaction, Users Manuals, Revision 7.0, Ghiocel Predictive Technologies, Inc., September 26, 2012.

3.7-18 Deleted.

3.7-19 Design Guidance For Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants, Regulatory Guide 1.143, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, November 2001.

3.7-20 Deleted.

3.7-21 ANSYS, Advanced Analysis Techniques Guide, Release 11.0, ANSYS, Inc., 2007

3.7-22 Rules for Construction of Overhead and Gantry Cranes (Top Running Bridge, Multiple Girder), American Society of Mechanical Engineers, ASME-NOG-1 (i.e., Nuclear Overhead Gantry), New York, 2004.

3.7-23 Quality Assurance Requirements for Nuclear Facility Applications, The American Society of Mechanicals Engineers, NQA-1-2004, New York, New York, December 2004.

3.7-24 Minimum Design Loads for Buildings and Other Structures, American Society of Civil Engineers/Structural Engineering Institute, ASCE/SEI 7-05, Reston, VA, 2006.

3.7-25 Deleted.

3.7-26 Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components, Regulatory Guide 1.122, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, February 1978.

3.7-27 [*Combining Responses and Spatial Components in Seismic Response Analysis, Regulatory Guide 1.92, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, July 2006.*]* MIC-04-03-00016

3.7-28 Combining Responses and Spatial Components in Seismic Response Analysis, Regulatory Guide 1.92, Rev. 1, U.S. Nuclear Regulatory Commission, Washington, DC, February 1976.

3.7-29 PEPIPESTRESS Theory Manual, Rev. 0, May 1988.

3.7-30 International Building Code, International Building Code Council, Inc., Country Club Hills, IL, 2006.

3.7-31 Code Requirements for Nuclear Safety-Related Concrete Structures (ACI 349-06) and Commentary, American Concrete Institute, 2006.

3.7-32 Specification for the Design, Fabrication and Erection of Steel Safety-Related Structures for Nuclear Facilities, ANSI/AISC N690-1994 including Supplement 2 (2004), American National Standards Institute/American Institute of Steel Construction, 1994 & 2004.

3.7-33 Deleted.

3.7-34 Foundations, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, SRP 3.8.5, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, March 2007.

3.7-35 Seismic Subsystem Analysis, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, United States Nuclear Regulatory Commission, SRP 3.7.3, Rev. 3, March 2007.

3.7-36 Hyde, S.J., J.M. Pandya, and K.M. Vashi, Seismic Analysis of Auxiliary Mechanical Equipment in Nuclear Plants, Dynamic and Seismic Analysis of Systems and Components, ASME-PVP-65, American Society of Mechanical Engineers, Orlando, Florida, 1982.

3.7-37 Lin, C.W., T.C. Esselman, Equivalent Static Coefficients for Simplified Seismic Analysis of Piping Systems, SMIRT Conference 1983, Paper K12/9.

3.7-38 Independent Support Motion (ISM) Method of Modal Spectra Seismic Analysis, Task Group on Independent Support Motion as Part of the PVRC Technical Committee on Piping Systems, December 1989.

3.7-39 Seismic Instrumentation, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants. NUREG-0800, United States Nuclear Regulatory Commission, SRP 3.7.4, Rev. 2, March 2007.

Vol. 2: Appendices for Ground Motion Estimation

Vol. 3: Appendices for Field Investigations

Vol. 4: Appendices for Laboratory Investigations

Vol. 5: Quantification of Seismic Source Effects

3.7-56 PEER NGA Strong Motion Database, Pacific Earthquake Engineering Research Center, http://peer.berkeley.edu/nga/, University of California, Berkeley, CA, 2006.

3.7-57 ANSI/AISC 360-05 Specification for Structural Steel Buildings. AISC, American Institute of Steel Construction, 13th Edition, 2005.

3.7-58 Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants, RG 1.221, Rev. 0, U.S. Nuclear Regulatory Commission, Washington, D.C., October 2011.

3.7-59 Recommendations for Resolution of Public Comments on USI A-40 "Seismic Design Criteria," NUREG/CR-5347, U.S. Nuclear Regulatory Commission, Washington, D.C., May, 1989.

3.7-60 Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities, ASCE/SEI 43-05, American Society of Civil Engineers, 2005.

3.7-61 Turbine Building Model Properties, SSI Analyses, and Structural Integrity Evaluation, MUAP-11002, Revision 2, Mitsubishi Heavy Industries, Ltd, February 2013.

3.7-62 Site Response Analyses of Vertical Excitation, Proceedings of the Third Specialty Conference on Geotechnical Earthquake Engineering and Soil Dynamics, Mok, Chin Man, Chang, C.-Y., and Lagapsi, Dante E., Seattle, Washington, Geotechnical Special Publication No. 75, ASCE, August 3 - 6, 1998.

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

[Table 3.7.1-3 Summary of SRP 3.7 Option 1, Approach 1 Requirements Compliance

MIC-04-03-00016

Requirement		*H2(90)*	*H1(180)*	*V(UP)*
Time Histories Requirements				
Total duration in seconds (if ≥ 20 seconds OK)		*22.08*	*22.08*	*22.08*
Rise time in seconds: Arias intensity 5% (if 1 second or longer OK)		*2.815*	*3.031*	*1.337*
Strong motion duration in seconds: Arias intensity between 5% and 75% (minimum 6 seconds and satisfying NUREG/CR-6728 criteria)(1)		*9.543*	*7.868*	*10.35*
Decay time in seconds: Arias intensity between 75% and 100% (if 5 seconds or longer OK)		*9.722*	*11.181*	*10.393*
Statistical independence (if absolute value ≤ 0.16 OK)		*-0.0179*	*-0.0179*	
		-0.0552		*-0.0552*
			-0.0696	*-0.0696*
V/A (if 7.51 ≤ V/A ≤ 66.40 OK)(2)		*53.179*	*66.355*	*42.661*
AD/V^2 (if 1.86 ≤ AD/V^2 ≤ 16.79 OK)(2)		*4.306*	*2.997*	*5.766*
Response Spectra Requirements				
SRP 3.7.1 Option 1, Approach 1				
Number of points with acceleration ratio < 1 (if ≤ 5 OK)	*2%*	*2*	*5*	*5*
	3%	*0*	*0*	*1*
	5%	*0*	*0*	*0*
	7%	*0*	~~*0*~~ *1*	*0*
	10%	~~*4*~~ *5*	~~*0*~~ *1*	~~*2*~~ *4*
Number of points with acceleration ratio < 0.9 (if 0 OK)	*All*	*0*	*0*	*0*
Power Spectral Density Function Requirements				
Number of points below 80% of target between 0.3 and 50 hz (if 0 OK)		*0*	*0*	*0]**

(1) Refer to Table 3.7.1-4.

(2) Refer to Table 3.7.1-5.

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

MIC-04-03-00016

Table 3.7.2-2 Concrete Material Constants

	Modulus of Elasticity (Young's Modulus) E_c (ksi)	Shear Modulus G_c (ksi)	Poisson's Ratio ν	Remark
PCCV	[*4,769*	*2,040*	*0.17*]*	f'_c = 7,000 psi
R/B	[*4,031*	*1,723*	*0.17*]*	f'_c = 5,000 psi
Containment Internal Structure	[*3,605*	*1,540*	*0.17*	f'_c = *4,000 psi*]*

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

Table 3.7.2-3 Material Properties of Models Used for Seismic Response Analyses

Stiffness Level	Structural Component	Stiffness	Damping
Full (Uncracked) Stiffness	SC module (CIS)	[*Loading Condition A in Table 3.8.3-4*	
	Pre-stressed (PCCV)	*100%*	*3%*
	Reinforced Concrete	*100%*	*4%*
	Composite (FH/A)	See note (1)	*4% concrete 3% steel*
	Steel	*100%*	*3%*
	RCL	*100%*	*3%*
	Massive concrete	*100%*	*4%*
Reduced (Cracked) Stiffness	SC module (CIS)	*Loading Condition B in Table 3.8.3-4*	
	Pre-stressed (PCCV)	*50%*	*5%*
	Reinforced Concrete	*50%*	*7%*
	Composite (FH/A)	See note (2)	*7% concrete 4% steel*
	Steel	*100%*	*4%*
	RCL	*100%*	*3%*
	Massive concrete	*100%*	*4%*]*

MIC-04-03-00016

(1) See equations in Section 02.4.1.1.6 of MUAP-10006

(2) See equations in Section 02.4.1.1.6 of MUAP-10006, use E = 50% E_c

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

MIC-04-03-00016

Table 3.7.2-4 Fixed Base Dynamic Properties of US-APWR Category I Structures (Sheet 2 of 2)

Structure	Direction	Fixed Base Modal Properties	
		Frequency (Hz)	Effective Mass (kip sec^2/ft)
East PS/B	NS	6.4	3,636
		10.9	1,478
		13.2	174.2
	EW	7.1	1,549
		14.3	460.7
		15.6	135.6
	Vertical	12.7	3,645
		16.5	134.7
		21.0	144.3
West PS/B	NS	8.8	302.7
		10.9	1,477
		18.7	112.4
	EW	7.1	1,549
		13.2	128.9
	Vertical	12.7	3,6~~54~~45
		15.1	123.7
		20.6	153.9

MIC-04-03-00019

Table 3.7.3-1(a) SSE Damping Values

MIC-04-03-00016

[*Welded and friction-bolted steel structures and equipment (%)*	*4*
Bearing bolted structures and equipment (%)	*7*
Prestressed concrete structures (%)	*5*
Reinforced concrete structures (%)	*7*(4)
Steel-Concrete Modules (%)	*5*(4)
Piping systems(1)	*4*
Full cable trays & related supports (%)	*10*(2)
Empty cable trays and related supports (%)	*7*
Full Conduits & related supports (%)	*7*
Empty conduits & related supports (%)	*5*
HVAC pocket lock ductwork (%)	*10*
HVAC companion angle ductwork (%)	*7*
HVAC welded ductwork (%)	*4*
Cabinets and panels for electrical equipment (%)	*3*
Equipment such as welded instrument racks and tanks (impulsive mode) (%)	*3*(3)
Motors, fans, housings, pressure vessels, heat exchangers, pumps, valve bodies (%)	*3*]*

Table 3.7.3-1(b) OBE Damping Values

MIC-04-03-00016

[*Welded and friction-bolted steel structures and equipment (%)*	*3*
Bearing bolted structures and equipment (%)	*5*
Prestressed concrete structures (%)	*3*
Reinforced concrete structures (%)	*4*
Steel Concrete Modules (%)	*4*
Piping systems(1)	*3*
Full cable trays & related supports (%)	*7*(2)
Empty cable trays and related supports (%)	*5*
Full conduits & related supports (%)	*5*
Empty conduits & related supports (%)	*3*
HVAC pocket lock ductwork (%)	*7*
HVAC companion angle ductwork (%)	*5*
HVAC welded ductwork (%)	*3*
Cabinets and panels for electrical equipment (%)	*2*
Equipment such as welded instrument racks and tanks (impulsive mode)(%)	*2*(3)
Motors, fans, housings, pressure vessels, heat exchangers, pumps, valve bodies (%)	*2*]*

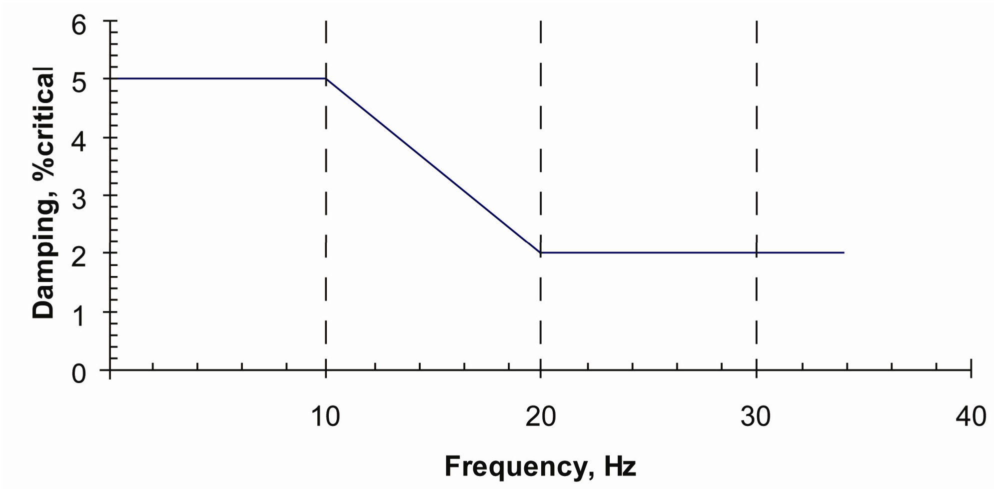
Notes for Tables 3.7.3-1(a) and 3.7.3-1(b):

1. As an alternative for response spectrum analyses using an envelope of the SSE or OBE response spectra at all support points (uniform support motion), frequency-dependent damping values shown in the graph below may be used, subject to the following restrictions:

   - Frequency-dependent damping should be used completely and consistently, if at all. Damping values for equipment other than piping are to be consistent with the values in the above table and RG 1.61 (Reference 3.7-15).

   - Use of the specified damping values is limited only to response spectral analyses. Acceptance of the use of the specified damping values with other types of dynamic analyses (e.g., time-history analyses or independent support motion method) requires further justification.

- When used for reconciliation or support optimization of existing designs, the effects of increased motion on existing clearances and online mounted equipment should be checked.
- Frequency-dependent damping is not appropriate for analyzing the dynamic response of piping systems using supports designed to dissipate energy by yielding.
- Frequency-dependent damping is not applicable to piping in which stress corrosion cracking has occurred, unless a case-specific evaluation is provided and reviewed, and found acceptable by the NRC staff.



2. The use of higher damping values for cable trays with flexible support systems (e.g., rod-hung trapeze systems, strut-hung trapeze systems, and strut-type cantilever and braced cantilever support systems) is permissible, subject to obtaining NRC review for acceptance on a case-by-case basis.
3. Use 0.5% damping for sloshing mode for tanks
4. Refer to Table 3.8.3-4 for appropriate damping values of the containment internal structure

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.* MIC-04-03-00016

movable gripper coil energized is a back-up to hold the drive rod if the stationary gripper coil current is interrupted by some single failure.

To trip the control rods, the current is cut off to both the movable gripper and stationary gripper coils. The movable gripper and stationary gripper latches are swung out from engagement with the drive rod by spring force in the latch mechanisms and gravity, and without support, the RCCA will insert, causing a “scram.”

3.9.4.1.5 Testing Program

The test program of the CRDM is described in Subsection 3.9.4.4.

3.9.4.2 Applicable CRDS Design Specifications

According to 10 CFR 50.55a (Reference 3.9-29) and GDC 1, 2, 4, 14, and 29 requirements, the CRDM is designed, fabricated, and tested in accordance with quality standards commensurate with the safety functions to be performed so as to assure an extremely high probability of accomplishing the safety functions in the event of AOOs, postulated accidents, and natural phenomena, such as earthquakes.

The CRDM materials are discussed in Subsection 4.5.1. The rod position indicator is discussed in Subsection 7.7.1.4.

3.9.4.2.1 CRDM Functional Requirements

The functional requirements of the CRDM are as follows:

- Step length: 0.625 inch per step
- Maximum speed: 72 steps per minute (45 inches per minute)
- Travel length: 165.472 inches (nominal full steps at cold condition)
- Design drive line load: 374.8 pounds
- Trip delay time: Less than or equal to 0.15 seconds

  This is the response time of the latch mechanism (i.e., between when the coil current is cut off and the rod drop begins).

- Design life: 60 years
- Rapid RCCA insertion: Coil current is cut off to initiate dropping the RCCA and the drive rod. The RCCA and the drive rod are inserted by gravity.
- Design temperature for pressure housing and internal parts: 650°F
- Operating temperature for pressure housing and internals parts: ~~617~~550.6°F MIC-04-03-00020
- Design pressure inside of pressure housing: 2,500 psia
- Operating pressure inside of pressure housing: 2,250 psia

Table 3.9-7 List of Active Pumps (Sheet 2 of 3)

Pump	System	ASME Class	Normal Operation Mode	Post LOCA Mode	Basis
D-Emergency Feed Water Pump	EFWS	3	OFF	ON	Required For Feedwater Supply to SG
A-CCW Pump	CCWS	3	ON/OFF	ON	Required For Cooling Water Supply to Safety-Related Component
B-CCW Pump	CCWS	3	ON/OFF	ON	Required For Cooling Water Supply to Safety-Related Component
C-CCW Pump	CCWS	3	ON/OFF	ON	Required For Cooling Water Supply to Safety-Related Component
D-CCW Pump	CCWS	3	ON/OFF	ON	Required For Cooling Water Supply to Safety-Related Component
A-Spent Fuel Pit Pump	SFPCS	3	ON/OFF	ON/OFF	Required For SFP Cooling
B-Spent Fuel Pit Pump	SFPCS	3	ON/OFF	ON/OFF	Required For SFP Cooling
A-Essential Service Water Pump	ESWS	3	ON/OFF	ON	Required For Cooling Water Supply to CCHXs
B-Essential Service Water Pump	ESWS	3	ON/OFF	ON	Required For Cooling Water Supply to CCHXs
C-Essential Service Water Pump	ESWS	3	ON/OFF	ON	Required For Cooling Water Supply to CCHXs
D-Essential Service Water Pump	ESWS	3	ON/OFF	ON	Required For Cooling Water Supply to CCHXs
A-Refueling Water Recirculation Pump	RWS	3	ON/OFF	OFF	Required For Purifying Water in RWSP
B-Refueling Water Recirculation Pump	RWS	3	ON/OFF	OFF	Required For Purifying Water in RWSP
A-Essential Chiller Water Pump	ECWS	3	ON/OFF	ON	Required For Cooling Water Supply to HVACS
B-Essential Chiller Water Pump	ECWS	3	ON/OFF	ON	Required For Cooling Water Supply to HVACS

MIC-04-03-00010

Table 3.9-7 List of Active Pumps (Sheet 3 of 3)

Pump	System	ASME Class	Normal Operation Mode	Post LOCA Mode	Basis
C-Essential Chiller Water Pump	ECWS	3	ON/OFF	ON	Required For Cooling Water Supply to HVACS
D-Essential Chiller Water Pump	ECWS	3	ON/OFF	ON	Required For Cooling Water Supply to HVACS
A-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
B-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
C-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
D-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
E-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
F-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
G-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine
H-Emergency Gas Turbine Fuel Oil Transfer Pump	FOS	3	OFF	ON	Required For Fuel Oil Supply to Gas Turbine

MIC-04-03-00010

Table 3.9-14 Valve Inservice Test Requirements (Sheet 1 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RCS-SRV-120	Pressurizer safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position	BC	Remote Position Indication, Alternate/ 2 Years Class 1 Relief Valve Tests/5 Years and 20% in 2 Years	1
RCS-SRV-121	Pressurizer safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position	BC	Remote Position Indication, Alternate/ 2 Years Class 1 Relief Valve Tests/5 Years and 20% in 2 Years	1
RCS-SRV-122	Pressurizer safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position	BC	Remote Position Indication, Alternate/ 2 Years Class 1 Relief Valve Tests/5 Years and 20% in 2 Years	1
RCS-SRV-123	Pressurizer safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position	BC	Remote Position Indication, Alternate/ 2 Years Class 1 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 2 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RCS-MOV-117A	Safety depressurization valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15
RCS-MOV-117B	Safety depressurization valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15
RCS-MOV-116A	Safety depressurization valve block valve	Remote MO Gate	Maintain Open Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/Refueling Outage	15
RCS-MOV-116B	Safety depressurization valve block valve	Remote MO Gate	Maintain Open Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/Refueling Outage	15
(Deleted)							

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 3 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
(Deleted)							
RCS-MOV-002A	Reactor vessel head vent valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15
RCS-MOV-002B	Reactor vessel head vent valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15
RCS-MOV-003A	Reactor vessel head vent valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15
RCS-MOV-003B	Reactor vessel head vent valve	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/Refueling Outage	2 15

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 4 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RCS-AOV-132	Nitrogen gas supply line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5 6
RCS-VLV-133	Nitrogen gas supply line containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
RCS-AOV-138	Primary makeup water supply line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5 6
RCS-VLV-139	Primary makeup water supply line containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 5 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RCS-AOV-147	Pressurizer relief tank gas analyzer line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5 6
RCS-AOV-148	Pressurizer relief tank gas analyzer line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5 6
RCS-VLV-140	Vacuum venting line check valve bypass	Manual	Maintain Close	Passive Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5
	~~Pressurizer relief tank rupture disk~~	~~Rupture Disk~~	~~Transfer Open~~	~~Active~~	~~D~~	~~Device replacement/ 5 Years~~	
	~~Pressurizer relief tank rupture disk~~	~~Rupture Disk~~	~~Transfer Open~~	~~Active~~	~~D~~	~~Device replacement/ 5 Years~~	

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 6 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-AOV-001A	Letdown valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-AOV-001B	Letdown valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-AOV-001C	Letdown valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-LCV-361	Letdown line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-LCV-362	Letdown line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 7 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-AOV-005	Letdown containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	4 5
CVS-AOV-006	Letdown containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	4 5
CVS-MOV-152	Charging line containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	4 5
CVS-MOV-151	Charging line isolation	Remote MO Gate	Maintain Close Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 8 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-VLV-153	Charging line containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
CVS-AOV-155	Auxiliary pressurizer spray line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-VLV-156	Auxiliary pressurizer spray line check	Check	Maintain Close Transfer Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-AOV-159	Charging line isolation	Remote AO Globe	Maintain Close Transfer Close Transfer Open	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-VLV-161	Charging line check (First)	Check	Maintain Close Transfer Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-160	Charging line check (Second)	Check	Maintain Close Transfer Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 9 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-MOV-178A	Reactor coolant pump seal injection line containment isolation	Remote MO Globe	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
CVS-VLV-179A	Reactor coolant pump seal injection line containment isolation check	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
CVS-MOV-178B	Reactor coolant pump seal injection line containment isolation	Remote MO Globe	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
CVS-VLV-179B	Reactor coolant pump seal injection line containment isolation check	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 10 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-MOV-178C	Reactor coolant pump seal injection line containment isolation	Remote MO Globe	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
CVS-VLV-179C	Reactor coolant pump seal injection line containment isolation check	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
CVS-MOV-178D	Reactor coolant pump seal injection line containment isolation	Remote MO Globe	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
CVS-VLV-179D	RCP seal injection line containment isolation check	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 11 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-AOV-192A	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-192B	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-192C	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-192D	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-196A	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 12 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-AOV-196B	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-196C	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-AOV-196D	Reactor coolant pump seal return line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
CVS-MOV-203	Reactor coolant pump seal return line containment isolation	Remote MO Globe	Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 13 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-MOV-204	Reactor coolant pump seal return line containment isolation	Remote MO Globe	Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
CVS-VLV-129A	Charging pump minimum flow check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-129B	Charging pump minimum flow check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
~~CVS-VLV-592~~	~~Charging pump alternate makeup line check~~	~~Check~~	~~Transfer Open~~	~~Active~~	~~BC~~	~~Check Exercise/ Refueling Outage~~	~~3~~
~~CVS-VLV-594~~	~~Charging pump alternate makeup line check~~	~~Check~~	~~Transfer Open~~	~~Active~~	~~BC~~	~~Check Exercise/ Refueling Outage~~	~~3~~
CVS-VLV-131A	Charging pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-131B	Charging pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-181A	Reactor coolant pump seal injection line check (First)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008
DCD_03.11-62
DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 14 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-VLV-181B	Reactor coolant pump seal injection line check (First)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-181C	Reactor coolant pump seal injection line check (First)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-181D	Reactor coolant pump seal injection line check (First)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-182A	Reactor coolant pump seal injection line check (Second)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-182B	Reactor coolant pump seal injection line check (Second)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-182C	Reactor coolant pump seal injection line check (Second)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3
CVS-VLV-182D	Reactor coolant pump seal injection line check (Second)	Check	Maintain Open Transfer Open Transfer Close Maintain Close	Active RCS Pressure Boundary	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 15 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-FCV-128	Primary makeup water supply isolation	Remote MO Gate	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
CVS-FCV-129	Primary makeup water supply isolation	Remote MO Gate	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
CVS-AOV-221	Excess letdown isolation (First)	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-AOV-222	Excess letdown isolation (Second)	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail RCS Pressure Boundary Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
CVS-SRV-002	Letdown line relief valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
CVS-SRV-201	Reactor coolant pump seal water return line relief valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 16 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CVS-VLV-202	Reactor coolant pump seal return line containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment isolation Leak Test	5
SIS-MOV-001A	Safety injection pump suction isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage	
SIS-MOV-001B	Safety injection pump suction isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage	
SIS-MOV-001C	Safety injection pump suction isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage	
SIS-MOV-001D	Safety injection pump suction isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage	
SIS-VLV-004A	Safety injection pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 17 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-004B	Safety injection pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
SIS-VLV-004C	Safety injection pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
SIS-VLV-004D	Safety injection pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
SIS-MOV-009A	Safety injection pump discharge containment isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage Excercise Full Stroke/ Quarterly Operability Test	
SIS-MOV-009B	Safety injection pump discharge containment isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage Excercise Full Stroke/ Quarterly Operability Test	
SIS-MOV-009C	Safety injection pump discharge containment isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage Excercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 18 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-009D	Safety injection pump discharge containment isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Leak Test/ Refueling Outage Excercise Full Stroke/ Quarterly Operability Test	
SIS-VLV-010A	Safety injection pump discharge containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Leak Test/ Refueling Outage Check Exercise/ Refueling Outage	3
SIS-VLV-010B	Safety injection pump discharge containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Leak Test/ Refueling Outage Check Exercise/ Refueling Outage	3
SIS-VLV-010C	Safety injection pump discharge containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Leak Test/ Refueling Outage Check Exercise/ Refueling Outage	3
SIS-VLV-010D	Safety injection pump discharge containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Leak Test/ Refueling Outage Check Exercise/ Refueling Outage	3

MIC-04-03-00008
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 19 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-011A	Direct vessel safety injection line isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SIS-MOV-011B	Direct vessel safety injection line isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SIS-MOV-011C	Direct vessel safety injection line isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SIS-MOV-011D	Direct vessel safety injection line isolation	Remote MO Globe	Maintain Open Maintain Close Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SIS-VLV-012A	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 20 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-013A	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-012B	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-013B	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-012C	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-013C	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-012D	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 21 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-013D	Direct vessel injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-MOV-014A	Hot leg injection line isolation	Remote MO Globe	Maintain Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	8 15
SIS-MOV-014B	Hot leg injection line isolation	Remote MO Globe	Maintain Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	8 15
SIS-MOV-014C	Hot leg injection line isolation	Remote MO Globe	Maintain Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	8 15

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 22 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-014D	Hot leg injection line isolation	Remote MO Globe	Maintain Close Transfer Open	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	8 15
SIS-VLV-015A	Hot leg injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-015B	Hot leg injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-015C	Hot leg injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
SIS-VLV-015D	Hot leg recirculation line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 23 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-031A	Emergency letdown line isolation (first)	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15
SIS-MOV-031D	Emergency letdown line isolation (first)	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15
SIS-MOV-032A	Emergency letdown line isolation (second)	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15
SIS-MOV-032D	Emergency letdown line isolation (second)	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 24 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-101A	Accumulator discharge valve	Remote MO Gate	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Hot Shutdown Operability Test	13
SIS-MOV-101B	Accumulator discharge valve	Remote MO Gate	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Hot Shutdown Operability Test	13
SIS-MOV-101C	Accumulator discharge valve	Remote MO Gate	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Hot Shutdown Operability Test	13
SIS-MOV-101D	Accumulator discharge valve	Remote MO Gate	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Hot Shutdown Operability Test	13

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 25 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-102A	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-103A	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-102B	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-103B	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-102C	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 26 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-103C	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-102D	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-VLV-103D	Accumulator injection line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise /Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	
SIS-AOV-114	Accumulator nitrogen supply containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication Exercise/2 years Containment Isolation Leak Test Exercise Full Stroke /Cold Shutdown Operability Test	5 6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 27 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-VLV-115	Accumulator nitrogen supply containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	5 3
SIS-SRV-116	Accumulator nitrogen supply header safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
SIS-MOV-121A	Accumulator nitrogen discharge valve	Remote MO Globe	Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Quarterly Operability Test	
SIS-MOV-121B	Accumulator nitrogen discharge valve	Remote MO Globe	Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Quarterly Operability Test	
SIS-MOV-125A	Accumulator nitrogen supply line isolation	Remote MO Globe	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test	9

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 28 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SIS-MOV-125B	Accumulator nitrogen supply line isolation	Remote MO Globe	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test	9
SIS-MOV-125C	Accumulator nitrogen supply line isolation	Remote MO Globe	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test	9
SIS-MOV-125D	Accumulator nitrogen supply line isolation	Remote MO Globe	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke / Cold Shutdown Operability Test	9
SIS-SRV-126A	Accumulator safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
SIS-SRV-126B	Accumulator safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
SIS-SRV-126C	Accumulator safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
SIS-SRV-126D	Accumulator safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 29 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-001A	Containment spray/residual heat removal pump hot leg isolation Inner	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 15
RHS-MOV-002A	Containment spray/residual heat removal pump hot leg isolation Outer	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 10 15
RHS-MOV-001B	Containment spray/residual heat removal pump hot leg isolation - Inner	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 15

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 30 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-002B	Containment spray/residual heat removal pump hot leg isolation - outer	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 10 15
RHS-MOV-001C	Containment spray/residual heat removal pump hot leg isolation inner	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 15
RHS-MOV-002C	Containment spray/residual heat removal pump hot leg isolation outer	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 10 15

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 31 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-001D	Containment spray/residual heat removal pump hot leg isolation inner	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 15
RHS-MOV-002D	Containment spray/residual heat removal pump hot leg isolation outer	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active RCS Pressure Boundary Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Pressure Isolation Leak Test/ Refueling Outage Operability Test	8 10 15
RHS-SRV-003A	Containment spray/residual heat removal pump suction relief	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	10
RHS-SRV-003B	Containment spray/residual heat removal pump suction relief	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	10

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 32 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-SRV-003C	Containment spray/residual heat removal pump suction relief	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	10
RHS-SRV-003D	Containment spray/residual heat removal pump suction relief	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	10
RHS-MOV-021A	Containment spray/residual heat removal pump discharge line containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	10
RHS-MOV-021B	Containment spray/residual heat removal pump discharge line containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	10
RHS-MOV-021C	Containment spray/residual heat removal pump discharge line containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	10

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 33 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-021D	Containment spray/residual heat removal pump discharge line containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	10
RHS-VLV-022A	Containment spray/residual heat removal pump discharge line containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Check Exercise/ Refueling Outage	3 10
RHS-VLV-022B	Containment spray/residual heat removal pump discharge line containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Check Exercise/ Refueling Outage	3 10
RHS-VLV-022C	Containment spray/residual heat removal pump discharge line containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Check Exercise/ Refueling Outage	3 10
RHS-VLV-022D	Containment spray/residual heat removal pump discharge line containment isolation check	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation	BC	Check Exercise/ Refueling Outage	3 10

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 34 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-SRV-023A	Containment spray/residual heat removal heat exchanger outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
RHS-SRV-023B	Containment spray/residual heat removal heat exchanger outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
RHS-SRV-023C	Containment spray/residual heat removal heat exchanger outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
RHS-SRV-023D	Containment spray/residual heat removal heat exchanger outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
RHS-MOV-025A	Containment spray/residual heat removal pump full-flow test line stop	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
RHS-MOV-025B	Containment spray/residual heat removal pump full-flow test line stop	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 35 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-025C	Containment spray/residual heat removal pump full-flow test line stop	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
RHS-MOV-025D	Containment spray/residual heat removal pump full-flow test line stop	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
RHS-MOV-026A	Residual heat removal flow control	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	8
RHS-MOV-026B	Residual heat removal flow control	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	8
RHS-MOV-026C	Residual heat removal flow control	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	8

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 36 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-MOV-026D	Residual heat removal flow control	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	8
RHS-VLV-027A	Residual heat removal(RHR) discharge line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
RHS-VLV-027B	RHR discharge line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
RHS-VLV-027C	RHR discharge line check	Check	Maintain Close Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
RHS-VLV-027D	RHR discharge line check	Check	Maintain Close ~~Maintain~~Transfer Open	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3
RHS-VLV-028A	RHR discharge line check	Check	Transfer Open Maintain Close	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 37 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes	
								MIC-04-03-00008
RHS-VLV-028B	RHR discharge line check	Check	Transfer Open Maintain Close	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3	DCD_03.11-62
RHS-VLV-028C	RHR discharge line check	Check	Transfer Open Maintain Close	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3	DCD_03.11-62
RHS-VLV-028D	RHR discharge line check	Check	Transfer Open Maintain Close	Active RCS Pressure Boundary Safety Seat Leakage	AC	Check Exercise/ Refueling Outage Pressure Isolation Leak Test/ Refueling Outage	3	DCD_03.11-62
RHS-VLV-004A	Containment spray/residual heat removal pump suction line check	Check	Maintain Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3	
RHS-VLV-004B	Containment spray/residual heat removal pump suction line check	Check	Maintain Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3	
RHS-VLV-004C	Containment spray/residual heat removal pump suction line check	Check	Maintain Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3	

Table 3.9-14 Valve Inservice Test Requirements (Sheet 38 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RHS-VLV-004D	Containment spray/residual heat removal pump suction line check	Check	Maintain Close Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
EFS-MOV-019A	Emergency feed water isolation	Remote MO Gate	Maintain Open Transfer Open Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-019B	Emergency feed water isolation	Remote MO Gate	Maintain Open Transfer Open Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-019C	Emergency feed water isolation	Remote MO Gate	Maintain Open Transfer Open Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-019D	Emergency feed water isolation	Remote MO Gate	Maintain Open Transfer Open Transfer Close Maintain Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 39 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-MOV-017A	Emergency feed water control	Remote MO Gate	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-017B	Emergency feed water control	Remote MO Globe	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-017C	Emergency feed water control	Remote MO Globe	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-017D	Emergency feed water control	Remote MO Globe	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-103A	Turbine driven emergency feed water pump steam inlet	Remote MO Gate	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 40 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-MOV-103B	Turbine driven emergency feed water pump steam inlet	Remote MO Gate	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-103C	Turbine driven emergency feed water pump steam inlet	Remote MO Gate	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-103D	Turbine driven emergency feed water pump steam inlet	Remote MO Gate	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-101A	Turbine driven emergency feed water pump steam supply line isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-101B	Turbine driven emergency feed water pump steam supply line isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 41 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-MOV-101C	Turbine driven emergency feed water pump steam supply line isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-101D	Turbine driven emergency feed water pump steam supply line isolation	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-006A	Emergency feedwater pump suction tieline isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-006B	Emergency feedwater pump suction tieline isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
EFS-MOV-031	EFW supply line to SFP isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 42 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-VLV-008A	Emergency feed water pit outlet check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-008B	Emergency feed water pit outlet check	Check	Transfer Open	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-012A	Emergency feed water pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-012B	Emergency feed water pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-012C	Emergency feed water pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-012D	Emergency feed water pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-020A	Emergency feed water pump minimum flow line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-020B	Emergency feed water pump minimum flow line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 43 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-VLV-020C	Emergency feed water pump minimum flow line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-020D	Emergency feed water pump minimum flow line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-018A	Emergency feed water feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	C	Check Exercise/ Refueling Outage	3
EFS-VLV-018B	Emergency feed water feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	C	Check Exercise/ Refueling Outage	3
EFS-VLV-018C	Emergency feed water feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	C	Check Exercise/ Refueling Outage	3
EFS-VLV-018D	Emergency feed water feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	C	Check Exercise/ Refueling Outage	3
EFS-VLV-102A	Emergency feed water pump steam feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-102B	Emergency feed water pump steam feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 44 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EFS-VLV-102C	Emergency feed water pump steam feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-102D	Emergency feed water pump steam feeding line check	Check	Transfer Open Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
EFS-VLV-109A	Turbine driven emergency feedwater pump steam supply drain line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
EFS-VLV-109B	Turbine driven emergency feedwater pump steam supply drain line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
EFS-VLV-109C	Turbine driven emergency feedwater pump steam supply drain line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
EFS-VLV-109D	Turbine driven emergency feedwater pump steam supply drain line check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
FWS-VLV-511A	Main feedwater check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 45 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
FWS-VLV-511B	Main feedwater check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
FWS-VLV-511C	Main feedwater check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
FWS-VLV-511D	Main feedwater check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Refueling Outage	3
FWS-SMV-512A	Main feed water isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 46 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
FWS-SMV-512B	Main feed water isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11
FWS-SMV-512C	Main feed water isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11
FWS-SMV-512D	Main feed water isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11
FWS-FCV-510, 520, 530, 540	Main feed water regulation	Remote AO Globe	Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 47 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
FWS-FCV-511, 521, 531, 541	Main feed water bypass regulation	Remote AO Globe	Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
FWS-LCV-610, 620, 630, 640	Steam generator water filling control	Remote AO Globe	Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
(Deleted)							
(Deleted)							
MSS-MOV-507A	Main steam relief valve block	Remote MO Gate	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
MSS-MOV-507B	Main steam relief valve block	Remote MO Gate	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 48 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-MOV-507C	Main steam relief valve block	Remote MO Gate	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
MSS-MOV-507D	Main steam relief valve block	Remote MO Gate	Maintain Close Transfer Close Maintain Open	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
MSS-MOV-508A	Main steam depressurization valve	Remote MO Globe	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-MOV-508B	Main steam depressurization valve	Remote MO Globe	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 49 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-MOV-508C	Main steam depressurization valve	Remote MO Globe	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-MOV-508D	Main steam depressurization valve	Remote MO Globe	Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-SMV-515A	Main steam isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 50 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SMV-515B	Main steam isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11
MSS-SMV-515C	Main steam isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot Standby Operability Test	11
MSS-SMV-515D	Main steam isolation	System medium actuated Gate (using valve inside pressure to close)	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Hot standby Operability Test	11

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 51 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-HCV-565	Main steam bypass isolation	Remote AO Globe	Maintain Close Transfer Close	Active-To-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-HCV-575	Main steam bypass isolation valve	Remote AO Globe	Maintain Close Transfer Close	Active-To-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-HCV-585	Main steam bypass isolation	Remote AO Globe	Maintain Close Transfer Close	Active-To-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-HCV-595	Main steam bypass isolation	Remote AO Globe	Maintain Close Transfer Close	Active-To-Fail Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	4
MSS-SRV-509A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 52 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SRV-510A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-511A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-512A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-513A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-514A	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 53 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SRV-509B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-510B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-511B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-512B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-513B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 54 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SRV-514B	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-509C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-510C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-511C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-512C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 55 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SRV-513C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-514C	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-509D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-510D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-511D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 56 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-SRV-512D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-513D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-SRV-514D	Main steam safety valve	Relief	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position	BC	Remote Position Indication, Alternate/2 Years Class 2/3 Relief Valve Tests/5 Years and 20% in 2 Years	1
MSS-VLV-516A	Main steam check	Check	Maintain Close Transfer Close	Active	B	Check Exercise (Alternative method) /Cold Shutdown (of sufficient duration)	12
MSS-VLV-516B	Main steam check	Check	Maintain Close Transfer Close	Active	B	Check Exercise (Alternative method) /Cold Shutdown (of sufficient duration)	12
MSS-VLV-516C	Main steam check	Check	Maintain Close Transfer Close	Active	B	Check Exercise (Alternative method) /Cold Shutdown (of sufficient duration)	12

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 57 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-VLV-516D	Main steam check	Check	Maintain Close Transfer Close	Active	B	Check Exercise (Alternative method) /Cold Shutdown (of sufficient duration)	12
MSS-MOV-701A	Main steam drain line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
MSS-MOV-701B	Main steam drain line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
MSS-MOV-701C	Main steam drain line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
MSS-MOV-701D	Main steam drain line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 58 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CSS-MOV-001A	Containment spray/residual heat removal pump suction isolation (refueling water storage pit side)	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
CSS-MOV-001B	Containment spray/residual heat removal pump suction isolation (refueling water storage pit side)	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
CSS-MOV-001C	Containment spray/residual heat removal pump suction isolation (refueling water storage pit side)	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
CSS-MOV-001D	Containment spray/residual heat removal pump suction isolation (refueling water storage pit side)	Remote MO Gate	Maintain Open Maintain Close Transfer Close	Active Containment Isolation Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 59 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CSS-MOV-004A	Containment spray header containment isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/ Refueling Outage	
CSS-MOV-004B	Containment spray header containment isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/ Refueling Outage	
CSS-MOV-004C	Containment spray header containment isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/ Refueling Outage	
CSS-MOV-004D	Containment spray header containment isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test Leak Test/ Refueling Outage	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 60 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
CSS-VLV-005A	Containment spray header containment isolation	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise /Refueling Outage	
CSS-VLV-005B	Containment spray header containment isolation	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise /Refueling Outage	
CSS-VLV-005C	Containment spray header containment isolation	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise /Refueling Outage	
CSS-VLV-005D	Containment spray header containment isolation	Check	Maintain Close Transfer Open Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise /Refueling Outage	
NCS-MOV-007A	Train return header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 61 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-007B	Train return header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7
NCS-MOV-007C	Train return header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7
NCS-MOV-007D	Train return header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 62 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-020A	Train supply header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7
NCS-MOV-020B	Train supply header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7
NCS-MOV-020C	Train supply header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 63 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-020D	Train supply header separation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Train separation portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	7
NCS-MOV-145A	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-145B	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-145C	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-145D	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Close Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 64 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-146A	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Open Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-146B	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Open Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-146C	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Open Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-146D	Containment spray/residual heat exchanger component cooling water isolation	Remote MO Gate	Maintain Open Transfer Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-VLV-306A	Charging pump CCW supply line check valve	Check	Transfer Open	Active	C	Check Exercise/ Refueling Outage	3
NCS-VLV-306B	Charging pump CCW supply line check valve	Check	Transfer Open	Active	C	Check Exercise/ Refueling Outage	3

Table 3.9-14 Valve Inservice Test Requirements (Sheet 65 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-316A	Charger Pump component cooling water return	Remote MO Gate	Maintain Open	Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-316B	Charger Pump component cooling water return	Remote MO Gate	Maintain Open	Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
NCS-MOV-511	Excess letdown heat exchanger component cooling water supply containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
NCS-MOV-517	Excess letdown heat exchanger component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 66 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-531	Letdown heat exchanger component cooling water supply containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	4 5
NCS-MOV-537	Letdown heat exchanger component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	4 5
NCS-VLV-231A	A, B-reactor coolant pump supply line check	Check	Maintain Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-231B	A, B-reactor coolant pump supply line check	Check	Maintain Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 67 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-232A	Cross-connection between A,B-reactor coolant pump and C,D-reactor coolant pump component cooling water supply line isolation	Remote MO Gate	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-232B	Cross-connection between A,B-reactor coolant pump and C,D-reactor coolant pump component cooling water supply line isolation	Remote MO Gate	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-233A	Cross-connection between A,B-reactor coolant pump and C,D-reactor coolant pump component cooling water return line isolation	Remote MO Gate	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 68 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-233B	Cross-connection between A,B-reactor coolant pump and C,D-reactor coolant pump component cooling water return line isolation	Remote MO Gate	Maintain Close Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-234A	A,B-reactor coolant pump return line valve	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-234B	A,B-reactor coolant pump return line valve	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-402A	Reactor coolant pump component cooling water supply containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 69 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-402B	Reactor coolant pump component cooling water supply containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
NCS-VLV-403A	Reactor coolant pump component cooling water supply containment isolation	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise / Refueling Outage	3 5
NCS-VLV-403B	Reactor coolant pump component cooling water supply containment isolation	Check	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise / Refueling Outage	3 5
NCS-MOV-438A	Reactor coolant pump component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7

Table 3.9-14 Valve Inservice Test Requirements (Sheet 70 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-438B	Reactor coolant pump component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
NCS-MOV-436A	Reactor coolant pump component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
NCS-MOV-436B	Reactor coolant pump component cooling water return containment isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 7
NCS-MOV-401A	Reactor coolant pump component cooling water supply line isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 71 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-401B	Reactor coolant pump component cooling water supply line isolation	Remote MO Gate	Maintain Close Transfer Close Transfer Open Maintain Open	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-446A	Reactor coolant pump motor component cooling water inlet side isolation	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-446B	Reactor coolant pump motor component cooling water inlet side isolation	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-446C	Reactor coolant pump motor component cooling water inlet side isolation	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-MOV-446D	Reactor coolant pump motor component cooling water inlet side isolation	Remote MO Gate	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

Table 3.9-14 Valve Inservice Test Requirements (Sheet 72 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-SRV-003A	Component cooling water surge tank relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
NCS-SRV-003B	Component cooling water surge tank relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
NCS-VLV-016A	Component cooling water pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-016B	Component cooling water pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-016C	Component cooling water pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-016D	Component cooling water Pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 73 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-AOV-057A	Component cooling water A2 supply header isolation	Remote AO Butterfly	Maintain Close Transfer Close	Active to Failed Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	6
NCS-AOV-058A	Component cooling water A2 supply header isolation	Remote AO Butterfly	Maintain Close Transfer Close	Active to Failed Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	6
NCS-VLV-036A	Component cooling water A2 return header check	Check	Maintain Close Transfer Close	Active Safety Seat Leakage	AC	Non-safety portion Isolation Leak Test Check Exercise/ Refueling Outage	3
NCS-VLV-037A	Component cooling water A2 return header check	Check	Maintain Close Transfer Close	Active Safety Seat Leakage	AC	Non-safety portion Isolation Leak Test Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 74 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-AOV-057B	Component cooling water C2 supply header isolation	Remote AO Butterfly	Maintain Close Transfer Close	Active to Failed Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	6
NCS-AOV-058B	Component cooling water C2 supply header isolation	Remote AO Butterfly	Maintain Close Transfer Close	Active to Failed Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	6
NCS-VLV-036B	Component cooling water C2 return header check	Check	Maintain Close Transfer Close	Active Safety Seat Leakage	AC	Non-safety portion Isolation Leak Test Check Exercise/ Refueling Outage	3
NCS-VLV-037B	Component cooling water C2 return header check	Check	Maintain Close Transfer Close	Active Safety Seat Leakage	AC	Non-safety portion Isolation Leak Test Check Exercise/ Refueling Outage	3
NCS-VLV-405A	Reactor coolant pump thermal barrier heat exchanger component cooling water supply check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 75 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-VLV-405B	Reactor coolant pump thermal barrier heat exchanger component cooling water supply check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-405C	Reactor coolant pump thermal barrier heat exchanger component cooling water supply check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-405D	Reactor coolant pump thermal barrier heat exchanger component cooling water supply check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-FCV-129A	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 76 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-FCV-130A	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-FCV-131A	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-FCV-132A	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-FCV-129B	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 77 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-FCV-130B	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-FCV-131B	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-FCV-132B	Reactor coolant pump thermal barrier heat exchanger component cooling water return isolation	Remote MO Globe	Maintain Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	7
NCS-SRV-435A	Reactor coolant pump component cooling water return line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
NCS-SRV-435B	Reactor coolant pump component cooling water return line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
NCS-VLV-439A	Reactor coolant pump component cooling water return line check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 78 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-VLV-439B	Reactor coolant pump component cooling water return line check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
NCS-VLV-437A	Reactor coolant pump component cooling water return containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test	5
NCS-VLV-437B	Reactor coolant pump component cooling water return containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test	5
NCS-MOV-321A	Charging pump fire water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-321B	Charging pump fire water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 79 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-322A	Charging pump alternative water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-322B	Charging pump alternative water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-323A	Charging pump non-essential chilled water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-323B	Charging pump non-essential chilled water supply line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 80 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-324A	Charging pump alternative water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-324B	Charging pump alternative water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-325A	Charging pump fire water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-325B	Charging pump fire water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 81 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-MOV-326A	Charging pump non-essential chilled water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-326B	Charging pump non-essential chilled water return line isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-241	Containment fan cooler alternative cooling water supply isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	
NCS-MOV-242	Containment fan cooler alternative cooling water supply isolation	Remote MO Gate	Maintain Close	Safety Seat Leakage	A	Remote Position Indication, Exercise/2 Years Non-safety portion Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 82 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SFS-MOV-001A,B	Cooling-purification lines isolation	Remote MO Gate	Transfer Close, Maintain Close	Active	BC	Remote Position Indication. Exercise/2 Years; Exercise Full Stroke/Quarterly Operability Test	
SFS-MOV-002A,B	Cooling-purification lines isolation	Remote MO Globe	Transfer Close, Maintain Close	Active	BC	Remote Position Indication. Exercise/2 Years; Exercise Full Stroke/Quarterly Operability Test	
SFS-MOV-028	SFP makeup line from RWSP isolation	Remote MO Gate	Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SFS-MOV-029	SFP makeup line from RWSP isolation	Remote MO Gate	Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
SFS-VLV-006A	Spent fuel pit pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
SFS-VLV-006B	Spent fuel pit pump discharge check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EWS-VLV-502A	Essential service water pump discharge check	Check	Maintain Open Transfer Open ~~Maintain Close~~ Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 83 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions(2)	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-VLV-502B	Essential service water pump discharge check	Check	Maintain Open Transfer Open Maintain Close Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EWS-VLV-502C	Essential service water pump discharge check	Check	Maintain Open Transfer Open Maintain Close Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EWS-VLV-502D	Essential service water pump discharge check	Check	Maintain Open Transfer Open Maintain Close Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
EWS-MOV-503A	Essential service water pump discharge	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
EWS-MOV-503B	Essential service water pump discharge	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
EWS-MOV-503C	Essential service water pump discharge	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 84 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-503D	Essential service water pump discharge	Remote MO Butterfly	~~Maintain Close~~ Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
EWS-MOV-573A	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-573B	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-573C	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-573D	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 85 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-574A	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-574B	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-574C	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-574D	Essential service water pump discharge strainer backwash isolation valve	Remote MO Butterfly	Maintain Close Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-701A	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 86 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-701B	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-701C	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-701D	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-706A	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-706B	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 87 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-706C	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-706D	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-707A	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-707B	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-707C	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 88 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-707D	Essential chiller unit ESW supply line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-708A	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-708B	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-708C	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-708D	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 89 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-709A	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-709B	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-709C	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-709D	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-710A	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 90 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
EWS-MOV-710B	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-710C	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
EWS-MOV-710D	Essential chiller unit ESW return line isolation valve	Remote MO Butterfly	Maintain Open Transfer Open Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
LMS-AOV-060	C/V reactor coolant drain tank nitrogen supply containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 91 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
LMS-AOV-056	C/V reactor coolant drain tank vent header containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
LMS-AOV-055	C/V reactor coolant drain tank vent header containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
LMS-AOV-053	C/V reactor coolant drain tank gas analyzer line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
LMS-AOV-052	C/V reactor coolant drain tank gas analyzer line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 92 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
LMS-LCV-010B	C/V reactor coolant drain tank discharge line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
LMS-LCV-010A	C/V reactor coolant drain tank discharge line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
LMS-AOV-105	C/V sump discharge line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 93 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
LMS-AOV-104	C/V sump discharge line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-AOV-003	Pressurizer gas phase sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-MOV-006	Pressurizer liquid phase sampling line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 94 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
PSS-MOV-013	C-loop hot leg sampling line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-MOV-023	B-loop hot leg sampling line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-MOV-031A	Pressurizer and loop sampling line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 95 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
PSS-MOV-031B	Loop sampling line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-MOV-052A	Containment spray/residual heat removal heat exchanger downstream sampling line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
PSS-MOV-052B	Containment spray/residual heat removal heat exchanger downstream sampling line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
PSS-MOV-052C	Containment spray/residual heat removal heat exchanger downstream sampling line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 96 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
PSS-MOV-052D	Containment spray/residual heat removal heat exchanger downstream sampling line isolation	Remote MO Globe	Maintain Close Transfer Close	Active Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
PSS-AOV-062A	Accumulator sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-AOV-062B	Accumulator sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 97 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
PSS-AOV-062C	Accumulator sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-AOV-062D	Accumulator sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-AOV-063	Accumulator sampling line containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 98 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
PSS-MOV-071	Post accident sampling return line containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
PSS-VLV-072	Post accident sampling return line containment isolation	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
SGS-AOV-001A	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
SGS-AOV-001B	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 99 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SGS-AOV-001C	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
SGS-AOV-001D	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
SGS-AOV-002A	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
SGS-AOV-002B	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 100 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SGS-AOV-002C	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
SGS-AOV-002D	Steam generator blow down isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Cold Shutdown Operability Test	6
SGS-AOV-031A	Steam generator blow down sampling line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
SGS-AOV-031B	Steam generator blow down sampling line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 101 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SGS-AOV-031C	Steam generator blow down sampling line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
SGS-AOV-031D	Steam generator blow down sampling line isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
RWS-MOV-004	Refueling water storage pit purification line containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 102 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RWS-MOV-002	Refueling water storage pit purification line containment isolation	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
RWS-AOV-022	Refueling water storage pit purification return line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Quarterly Operability Test	5
RWS-VLV-023	Refueling water storage pit purification return line containment isolation	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
RWS-VLV-003	Refueling water storage pit purification line containment isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5

MIC-04-03-00008

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 103 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions(2)	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RWS-VLV-012A	Refueling water recirculation pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
RWS-VLV-012B	Refueling water recirculation pump discharge check	Check	Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	
RWS-VLV-078	RWSP overflow pipe check valve	Check	Maintain Close	Passive	BC	Check Exercise/ Refueling Outage	3
RWS-VLV-079	RWSP overflow pipe check valve	Check	Maintain Close	Passive	BC	Check Exercise/ Refueling Outage	3
RWS-MOV-201	RWSP Purification Supply Line Isolation	Remote MO Gate	Transfer Open	Active Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 104 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
DWS-VLV-004	Demineralized water supply containment isolation	Manual	Maintain Close	Passive Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5
DWS-VLV-005	Demineralized water supply containment isolation check	Check	Maintain Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
IAS-MOV-002	Instrument air supply outside containment isolation	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Refueling Outage Operability Test	5 6
IAS-VLV-003	Instrument air supply containment isolation	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
SAS-VLV-101	Station service air supply line containment isolation	Manual	Maintain Close	Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 105 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
SAS-VLV-103	Station service air supply line containment isolation check	Check	Maintain Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
IGS-AOV-001	ICIGS line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shut down Operability Test	5 6
IGS-AOV-002	ICIGS line containment isolation	Remote AO weir type diaphragm	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shut down Operability Test	5 6
LTS-VLV-001	LRTS line containment isolation	Manual	Maintain Close	Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5
LTS-VLV-002	LRTS line containment isolation	Manual	Maintain Close	Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 106 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
FSS-AOV-001	FPWSS line to filter unit containment isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shut down Operability Test	5 6
FSS-VLV-003	FPWSS line to filter unit containment Isolation check	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
FSS-MOV-004	FPWSS line to reactor cavity containment isolation	Remote MO Gate	Maintain Close	Containment Isolation Safety Seat Leakage	A	Containment Isolation Leak Test	5
FSS-VLV-006	FPWSS line to reactor cavity containment isolation check	Check	Maintain Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
VCS-AOV-304	Containment High Volume Purge Supply Line Containment Isolation Outside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 107 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VCS-AOV-305	Containment High Volume Purge Supply Line Containment Isolation Inside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VCS-AOV-306	Containment High Volume Purge Exhaust Line Containment Isolation Inside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VCS-AOV-307	Containment High Volume Purge Exhaust Line Containment Isolation Outside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VCS-AOV-354	Containment Low Volume Purge Supply Line Containment Isolation Outside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 108 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VCS-AOV-355	Containment Low Volume Purge Supply Line Containment Isolation Inside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VCS-AOV-356	Containment Low Volume Purge Exhaust Line Containment Isolation Inside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VCS-AOV-357	Containment Low Volume Purge Exhaust Line Containment Isolation Outside of CV	Remote AO Butterfly	Maintain Close Transfer Close	Active-to-Failed Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5
VWS-TCV-141	Main Control Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 109 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-151	Main Control Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-161	Main Control Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-171	Main Control Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-206	Class 1E Electrical Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-226	Class 1E Electrical Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 110 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-246	Class 1E Electrical Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-266	Class 1E Electrical Room Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	6
VWS-TCV-304	Safeguard Component Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-314	Safeguard Component Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-324	Safeguard Component Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 111 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-334	Safeguard Component Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-402	Emergency Feedwater Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-412	Emergency Feedwater Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-422	Emergency Feedwater Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-432	Emergency Feedwater Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 112 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-502	Component Cooling Water Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-512	Component Cooling Water Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-522	Component Cooling Water Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-532	Component Cooling Water Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 113 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-542	Essential Chiller Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-552	Essential Chiller Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-562	Essential Chiller Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-572	Essential Chiller Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-582	Charging Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
(Deleted)							

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 114 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-592	Charging Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
(Deleted)							
VWS-TCV-602A	Annulus Emergency Exhaust Filtration Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-602B	Annulus Emergency Exhaust Filtration Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-612A	Annulus Emergency Exhaust Filtration Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 115 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-612B	Annulus Emergency Exhaust Filtration Unit Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-622	Penetration Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-632	Penetration Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-642	Penetration Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-652	Penetration Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 116 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-TCV-662A	Spent Fuel Pit Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-662B	Spent Fuel Pit Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-672A	Spent Fuel Pit Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-TCV-672B	Spent Fuel Pit Pump Area Air Handling Unit Cooling Coil Chilled Water Control	Remote AO 3-way	Transfer Open	Active-to-Failed Remote Position	B	Remote Position Indication, Exercise/2 Years Exercise Full Stroke/ Quarterly Operability Test	
VWS-VLV-005A	Essential Chilled Water Pump Discharge Check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
VWS-VLV-005B	Essential Chilled Water Pump Discharge Check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 117 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-VLV-005C	Essential Chilled Water Pump Discharge Check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
VWS-VLV-005D	Essential Chilled Water Pump Discharge Check	Check	Maintain Open Transfer Open Transfer Close	Active	BC	Check Exercise/ Refueling Outage	3
VWS-SRV-253A	Essential Chilled Water Compression Tank Relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
VWS-SRV-253B	Essential Chilled Water Compression Tank Relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
VWS-SRV-253C	Essential Chilled Water Compression Tank Relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
VWS-SRV-253D	Essential Chilled Water Compression Tank Relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
VWS-VLV-252A	Nitrogen Supply Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-252B	Nitrogen Supply Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-252C	Nitrogen Supply Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3

MIC-04-03-00008

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 118 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-VLV-252D	Nitrogen Supply Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-258A	Makeup Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-258B	Makeup Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-258C	Makeup Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-VLV-258D	Makeup Isolation	Check	Maintain Close Transfer Close	Active	BC	Check Exercise / Refueling Outage	3
VWS-MOV-403	Containment Fan Cooler Chilled Water Inlet Containment Isolation Outside of CV	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
VWS-MOV-407	Containment Fan Cooler Chilled Water Outlet Containment Isolation Outside of CV	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6

MIC-04-03-00008
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62
DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 119 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
VWS-MOV-422	Containment Fan Cooler Chilled Water Outlet Containment Isolation Inside of CV	Remote MO Gate	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/ 2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
VWS-VLV-421	Containment Fan Cooler Chilled Water Inlet Containment Isolation Inside of CV	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise/ Refueling Outage	5 3
VWS-VLV-423	Containment Fan Cooler Chilled Water Outlet Containment Isolation Inside of CV	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Check Exercise/ Refueling Outage	5 3
RMS-MOV-001	Containment Air Sampling Line Containment Isolation Inside of CV	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 120 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RMS-MOV-002	Containment Air Sampling Line Containment Isolation Outside of CV	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
RMS-MOV-003	Containment Air Sampling Return Line Containment Isolation Outside of CV	Remote MO Globe	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage Remote Position	A	Remote Position Indication, Exercise/2 Years Containment Isolation Leak Test Exercise Full Stroke/ Cold Shutdown Operability Test	5 6
RMS-VLV-005	Containment Air Sampling Return Line Containment Isolation Check Inside of CV	Check	Maintain Close Transfer Close	Active Containment Isolation Safety Seat Leakage	AC	Containment Isolation Leak Test Check Exercise/ Refueling Outage	3 5
NCS-SRV-406A	Reactor coolant pump component cooling water outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-406B	Reactor coolant pump component cooling water outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-406C	Reactor coolant pump component cooling water outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 121 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
NCS-SRV-406D	Reactor coolant pump component cooling water outlet relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-513	Excess letdown heat exchanger component cooling water outlet line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-533	Letdown heat exchanger component cooling water outlet line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-035A	Component cooling water A1/ A2 return line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
NCS-SRV-035B	Component cooling water C1/ C2 return line relief	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years	
GTS-VLV-001A,B,C,D	Fuel oil storage tank outlet check	Check	Transfer Open	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-004A,B,C,D	Fuel oil transfer pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-005A,B,C,D	Fuel oil transfer pump discharge check	Check	Transfer Open	Active	BC	Check Exercise/ Quarterly	

MIC-04-03-00008

Table 3.9-14 Valve Inservice Test Requirements (Sheet 122 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
GTS-VLV-101A,B,C,D	Air start valve	Remote AO Globe	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	14
GTS-VLV-102A,B,C,D	Air start valve	Remote AO Globe	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	14
GTS-VLV-103A,B,C,D	Air start valve	Remote AO Globe	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	14
GTS-VLV-104A,B,C,D	Air start valve	Remote AO Globe	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	14
GTS-SOV-109A,B,C,D	Air start pilot valve	Remote SO 3way	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	
GTS-SOV-110A,B,C,D	Air start pilot valve	Remote SO 3way	Transfer Open	Active	B	Exercise Full Stroke/ Quarterly	
GTS-VLV-117A,B,C,D	Air receiver inlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-118A,B,C,D	Air receiver inlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-123A,B,C,D	Air receiver relief valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
GTS-VLV-124A,B,C,D	Air receiver relief valve	Relief	Maintain Close Transfer Open Transfer Close	Active	BC	Class 2/3 Relief Valve Tests/10 Years and 20% in 4 Years	
GTS-VLV-161A,B,C,D	Air start outlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-162A,B,C,D	Air start outlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	

Table 3.9-14 Valve Inservice Test Requirements (Sheet 123 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions(2)	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
GTS-VLV-163A,B,C,D	Air start outlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	
GTS-VLV-164A,B,C,D	Air start outlet check	Check	Transfer Close	Active	BC	Check Exercise/ Quarterly	
SFS-VLV-133A	Spent fuel pit purification subsystem outlet isolation	Manual	Transfer Close	Active	B	Exercise Full Stroke/ 5 Years	
SFS-VLV-133B	Spent fuel pit purification subsystem outlet isolation	Manual	Transfer Close	Active	B	Exercise Full Stroke/ 5 Years	
SFS-VLV-036A	Spent fuel pit purification subsystem outlet check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Quarterly	
SFS-VLV-036B	Spent fuel pit purification subsystem outlet check	Check	Transfer Close Maintain Close	Active	BC	Check Exercise/ Quarterly	
RCS-MOV-118	Depressurization valve for severe accident	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 124 of 125)

MIC-04-03-00008

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions(2)	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
RCS-MOV-119	Depressurization valve for severe accident	Remote MO Globe	Maintain Close Transfer Open Transfer Close	Active RCS Pressure Boundary Remote Position Safety Seat Leakage	A	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold Shutdown Operability Test Leak Test/ Refueling Outage	2 15
RHS-AOV-024B	Low Pressure Letdown Line Isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
RHS-AOV-024C	Low Pressure Letdown Line Isolation	Remote AO Globe	Maintain Close Transfer Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Quarterly Operability Test	
MSS-PCV-515	Main Steam Relief Valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold shutdown Operability Test	4
MSS-PCV-525	Main Steam Relief Valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold shutdown Operability Test	4

DCD_03.11-62

DCD_03.11-62

DCD_03.11-62

Table 3.9-14 Valve Inservice Test Requirements (Sheet 125 of 125)

Valve Tag Number	Description	Valve/ Actuator Type	Safety-Related Missions	Safety Functions~~(2)~~	ASME IST Category	Inservice Testing Type and Frequency	IST Notes
MSS-PCV-535	Main Steam Relief Valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold shutdown Operability Test	4
MSS-PCV-545	Main Steam Relief Valve	Remote AO Globe	Transfer Close Maintain Close	Active-to-Fail Remote Position	B	Remote Position Indication, Exercise/ 2 Years Exercise Full Stroke/ Cold shutdown Operability Test	4

MIC-04-03-00008

Notes:
1. This note applies to the pressurizer safety valves and to the main steam safety valves. Their position indication sensors are tested during set-pressure testing required in I-8100 of the ASME OM Code, Mandatory Appendix I.
2. These valves are normally closed to maintain the reactor coolant system pressure boundary. These valves are tested during cold shutdowns when the reactor coolant system pressure is reduced to atmospheric pressure so that an opening of this valve during this IST will not cause a LOCA.
3. The check valve exercise test is performed during refueling outage. Valves in the inaccessible primary containment can not be tested during power operation. Test of valves in operating systems may cause impact of power operation. Simultaneous testing of valves in the same system group will be considered.
4. Test of these valves at power will result in an undesirable transient on the reactor coolant system or the steam generator secondary system. Therefore, exercise testing will be performed at cold shutdown to avoid impact on power operation.
5. Containment isolation valves leakage test frequency will be conducted in accordance with the “primary containment leakage rate test program” in accordance with 10 CFR 50 Appendix J.
6. Exercising these valves would stop necessary line for operation such as utilities etc. Therefore, exercise testing will be performed at cold shutdown to avoid impact on power operation.
7. Exercising these valves would stop seal injection/ return water or cooling water of the reactor coolant pumps. Such stop of water may result in damage to the reactor coolant pump or reactor trip. These valves are exercised during cold shutdowns when these components do not require the water flow.
8. These valves isolate the low pressure system from the high pressure the reactor coolant system. Opening during normal operation may result in damage of equipment or reactor trip. These valves are exercised during cold shutdowns.
9. Exercising these valves during power operation would cause a loss of necessary safety function for power operation that needs big efforts to recover it. These valves will be exercised during cold shutdowns.
10. The residual heat removal system hot leg suction containment isolation valves and cold leg discharge containment isolation valves are not containment isolation leak tested. The basis for the exception is:
    - Should the valves leak slightly when closed, the fluid seal within the pipe or the closed piping system outside containment would preclude release of containment atmosphere to the environment
    - During post-accident operations, the system is filled with recirculation water. During normal operation, the system is water filled, and degradation of valves or piping is readily detected
    - The residual heat removal system is a closed loop system, seismically-designed and designed as Quality Group B with a portion of outside containment.
    - The residual heat removal system valves are closed when the plant is in modes above hot shutdown.
11. This note applies to the main steam isolation valves and main feed water isolation valves. The valves are not full stroke tested quarterly at power since full valve stroking will result in a plant transient during normal power operation. These valves will be exercised during hot standby condition.

Table 3.9-15 Load combinations and stress limits for Secondary Core Support Structures

Operating conditions	Load Conditions	Occurrrаence	Stress limit	Remarks
Design	Design load combination for CS(1)	-	Design for CS(2)	(1) Table 3.9-11 (2) Table 3.9-12
Beyond design basis accidents	Core drop load	1	Level D for CS(3) + No buckling	(3) Table 3.9-12

MIC-04-03-00012

Note: 'CS' means Core Support Structures.

3.10-16 Combining Modal Responses and Spatial Components in Seismic Response Analysis. Regulatory Guide 1.92, Rev. 2, U.S. Nuclear Regulatory Commission, Washington, DC, July 2006.

3.10-17 IEEE Standard for Qualification of Actuators for Power-Operated Valve Assemblies with Safety-Related Functions for Nuclear Power Plants, Institute of Electrical and Electronics Engineers (IEEE) Std 382-1996 (R2004).

3.10-18 Rules for Inservice Inspection of Nuclear Power Plant Components, ASME Boiler Pressure and Vessel Code. ASME Section XI, American Society of Mechanical Engineers.

3.10-19 Deleted

3.10-20 Initial Type Test Result of Class 1E Gas Turbine Generator System, MUAP-10023-P (Proprietary) and MUAP-10023-NP (Non-Proprietary), Rev. ~~5~~7, December 201~~2~~3. MIC-04-03-00018

demonstrated by proper incorporation of relevant environmental conditions into the design process, including the equipment specification.

The general requirements for environmental design and qualification can be summarized as follows: (1) the equipment shall be designed to have the capability of performing its design safety functions under all anticipated operational occurrences and normal, accident, and post-accident environment, and for the length of time for which its function is required; (2) the environmental qualification of equipment located in harsh environment shall be demonstrated by appropriate testing and/or analyses; and (3) a QA program meeting 10 CFR 50, Appendix B, shall be established and implemented to provide the assurance that all requirements have been satisfactorily accomplished. Environmental design and qualification requirements are described in MHI Technical Report MUAP-08015, “US-APWR Equipment Qualification Program,” issued as a separate report (Reference 3.11-3).

This equipment is addressed in the EQ Program to verify it is capable of performing its design function(s) under all anticipated service conditions. These service conditions are defined in 10 CFR 50.49(b)(1)(ii), (Reference 3.11-2) and are listed below. There is no nonsafety-related electrical equipment, located in a harsh environment, whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions by the safety-related equipment. The equipment addressed by the EQ Program is identified in Table 3D-2.

The typical design basis events include the following:

1. Normal operating conditions (e.g., refueling, shutdown, startup, operating)
2. AOO (e.g., plant trips, testing)
3. DBAs (e.g., LOCA, HELB)
4. External events (e.g., loss of offsite power)
5. Natural phenomena (e.g., earthquake, tornado, hurricane)

Technical report MUAP-08015 addresses the relevant environmental design and qualification requirements of 10 CFR 50.49; 10 CFR Part 50, Appendix A, General Design Criteria 1, 2, 4, and 23; and 10 CFR Part 50, Appendix B, Quality Assurance Criteria III, XI, and XVII; with respect to systems and components ~~being~~ important to safety within the scope described above that are designed to withstand the effects of, and ~~being~~are capable of performing their safety function, in the environmental conditions associated with normal operation, maintenance, testing, and accident conditions. This report also addresses seismic qualification as described in Section 3.10, and functional qualification of active mechanical components described in Section 3.9, as an integrated US-APWR equipment qualification program as described in Appendix 3D. Implementation of the EQ Program is addressed as part of this integrated equipment qualification program. DCD_03.11-66 S02

The Technical Report describes the EQ Program applicable to each licensed US-APWR. The Report describes the EQ process and its implementation during the design, procurement, construction, startup, and turnover phases of a US-APWR plant project. It

Table 3D-2 US-APWR Environmental Qualification Equipment List (Sheet 20 of 73)

Item Num	Equipment Tag	Description	Location		Purpose	Operational Duration	Environmental Conditions	Radiation Condition	Influence of Submergence for Total Integrated Dose	Qualification Process	Seismic Category	Comments
			Building	Zone	RT, ESF, PAM, Pressure Boundary (PB), Other(1)		Harsh or Mild	Harsh or Mild	Yes/No	E=Electrical M=Mechanical	I, II, Non	
78	VRS-TS-156	Main Control Room Temperature	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	(1)
79	VRS-TS-166	Main Control Room Temperature	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	(1)
80	VRS-TS-176	Main Control Room Temperature	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	(1)
81	VRS-TS-661	A-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
82	VRS-TS-664	A-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
83	VRS-TS-665	A-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
84	VRS-TS-671	B-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
85	VRS-TS-674	B-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
86	VRS-TS-675	B-Spent fuel pit pump area temperature	R/B	7	Other	1yr	Mild	Harsh	No (1)	E	I	
87	VRS-LS-147	A-Main Control Room Air Handling Unit Water Level	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	
88	VRS-LS-157	B-Main Control Room Air Handling Unit Water Level	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	
89	VRS-LS-167	C-Main Control Room Air Handling Unit Water Level	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	
90	VRS-LS-177	D-Main Control Room Air Handling Unit Water Level	R/B	2	Other	2wks	Mild	Mild	No (1)	E	I	
Cables												
1	N/A	Optical Cable	R/B	8	RT,ESF,PAM	1yr	Mild	Harsh	No (1)	E	I	
2	N/A	Instrumentation Cable (Harsh Specification)	PCCV, R/B	1-4 6	RT,ESF,PAM	1yr	Harsh	Harsh	No (1)	E	I	
3	N/A	Instrumentation Cable (Mild Specification)	R/B	7	RT,ESF,PAM	1yr	Mild	Harsh	No (1)	E	I	
4	N/A	Control Cable (Harsh Specification)	PCCV, R/B	1-4 6	ESF,PAM	1yr	Harsh	Harsh	No (1)	E	I	
5	N/A	Control Cable (Mild Specification)	R/B	7	RT,ESF,PAM	1yr	Mild	Harsh	No (1)	E	I	
6	N/A	Medium Voltage Power Cable (Harsh Specification)	R/B	6	ESF	30min	~~Harsh~~Mild	Harsh	No (1)	E	I	
7	N/A	Medium Voltage Power Cable (Mild Specification)	R/B	7	ESF	30min	Mild	Harsh	No (1)	E	I	
8	N/A	Low Voltage Power Cable (Harsh Specification)	PCCV, R/B	1-4 6	ESF	30min	Harsh	Harsh	No (1)	E	I	

MIC-04-03-00006

Table 3D-2 US-APWR Environmental Qualification Equipment List (Sheet 61 of 73)

Item Num	Equipment Tag	Description	Location		Purpose	Operational Duration	Environmental Conditions	Radiation Condition	Influence of Submergence for Total Integrated Dose	Qualification Process	Seismic Category	Comments
			Building	Zone	RT, ESF, PAM, Pressure Boundary (PB), Other(1)		Harsh or Mild	Harsh or Mild	Yes/No	E=Electrical M=Mechanical	I, II, Non	
31	VRS-MEH-201C	C-Class 1E Electrical Room Air Handling Unit Electric Heating Coil	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
32	VRS-MEH-201D	D-Class 1E Electrical Room Air Handling Unit Electric Heating Coil	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
33	VRS-MEH-202A	A-Class 1E I&C Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
34	VRS-MEH-202B	B-Class 1E I&C Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
35	VRS-MEH-202C	C-Class 1E I&C Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
36	VRS-MEH-202D	D-Class 1E I&C Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
37	VRS-MEH-203A	A-Class 1E Electrical Room MCR HVAC Equipment Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
38	VRS-MEH-203B	B-Class 1E Electrical Room MCR HVAC Equipment Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
39	VRS-MEH-203C	C-Class 1E Electrical Room MCR HVAC Equipment Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
40	VRS-MEH-203D	D-Class 1E Electrical Room MCR HVAC Equipment Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
41	VRS-MEH-211A	A-Remote Shutdown Console Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
42	VRS-MEH-211B	B-Remote Shutdown Console Room In-Duct Heater	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
43	VRS-MEH-204A	A-Class 1E Battery Room In-Duct Heater	~~R~~PS/B	~~8~~5	ESF	1yr	Mild	~~Harsh~~Mild	No (1)	M	I	
44	VRS-MEH-204B	B-Class 1E Battery Room In-Duct Heater	PS~~R~~/B	~~8~~5	ESF	1yr	Mild	~~Harsh~~Mild	No (1)	M	I	
45	VRS-MEH-204C	C-Class 1E Battery Room In-Duct Heater	~~R~~PS/B	~~8~~5	ESF	1yr	Mild	~~Harsh~~Mild	No (1)	M	I	
46	VRS-MEH-204D	D-Class 1E Battery Room In-Duct Heater	~~R~~PS/B	~~8~~5	ESF	1yr	Mild	~~Harsh~~Mild	No (1)	M	I	
47	VRS-EHD-201A	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
48	VRS-EHD-201B	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
49	VRS-EHD-201C	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
50	VRS-EHD-201D	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
51	VRS-EHD-202A	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
52	VRS-EHD-202B	Electro Hydraulic Operated Damper	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	

MIC-04-03-00017

Table 3D-2 US-APWR Environmental Qualification Equipment List (Sheet 70 of 73)

Item Num	Equipment Tag	Description	Location		Purpose	Operational Duration	Environmental Conditions	Radiation Condition	Influence of Submergence for Total Integrated Dose	Qualification Process	Seismic Category	Comments
			Building	Zone	RT, ESF, PAM, Pressure Boundary (PB), Other(1)		Harsh or Mild	Harsh or Mild	Yes/No	E=Electrical M=Mechanical	I, II, Non	
20	VAS-AOD-507D	Air Operated Damper	R/B	6	ESF	5min	Mild	Harsh	No (1)	M	I	
21	VAS-AOD-508A	Air Operated Damper	R/B	13-3	ESF	5min	Mild	Mild	No (1)	M	I	
22	VAS-AOD-508B	Air Operated Damper	R/B	13-3	ESF	5min	Mild	Mild	No (1)	M	I	
23	VAS-AOD-508C	Air Operated Damper	R/B	13-3	ESF	5min	Mild	Mild	No (1)	M	I	
24	VAS-AOD-508D	Air Operated Damper	R/B	13-3	ESF	5min	Mild	Mild	No (1)	M	I	
25	VAS-AOD-511	Air Operated Damper	R/B	~~6~~13-3	ESF	5min	Mild	~~Harsh~~Mild	No (1)	M	I	
26	VAS-AOD-512	Air Operated Damper	R/B	~~6~~13-3	ESF	5min	Mild	~~Harsh~~Mild	No (1)	M	I	
Equipment (Chilled Water System)												
1	VWS-MEQ-001A	A-Essential Chiller Unit	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
2	VWS-MEQ-001B	B-Essential Chiller Unit	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
3	VWS-MEQ-001C	C-Essential Chiller Unit	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
4	VWS-MEQ-001D	D-Essential Chiller Unit	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
5	VWS-MPP-001A	A-Essential Chilled Water Pump	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
6	VWS-MPP-001B	B-Essential Chilled Water Pump	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
7	VWS-MPP-001C	C-Essential Chilled Water Pump	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
8	VWS-MPP-001D	D-Essential Chilled Water Pump	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
9	Deleted											
10	Deleted											
11	Deleted											
12	Deleted											
13	VWS-TCV-141	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
14	VWS-TCV-151	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
15	VWS-TCV-161	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
16	VWS-TCV-171	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
17	VWS-TCV-206	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	

MIC-04-03-00017

Table 3D-2 US-APWR Environmental Qualification Equipment List (Sheet 71 of 73)

Item Num	Equipment Tag	Description	Location		Purpose	Operational Duration	Environmental Conditions	Radiation Condition	Influence of Submergence for Total Integrated Dose	Qualification Process	Seismic Category	Comments
			Building	Zone	RT, ESF, PAM, Pressure Boundary (PB), Other(1)		Harsh or Mild	Harsh or Mild	Yes/No	E=Electrical M=Mechanical	I, II, Non	
18	VWS-TCV-226	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
19	VWS-TCV-246	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
20	VWS-TCV-266	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
21	VWS-TCV-304	Chilled Water Control Valve	R/B	~~8~~6	ESF	1yr	Mild	Harsh	No (1)	M	I	MIC-04-03-00017
22	VWS-TCV-314	Chilled Water Control Valve	R/B	~~8~~6	ESF	1yr	Mild	Harsh	No (1)	M	I	
23	VWS-TCV-324	Chilled Water Control Valve	R/B	~~8~~6	ESF	1yr	Mild	Harsh	No (1)	M	I	
24	VWS-TCV-3~~4~~34	Chilled Water Control Valve	R/B	~~8~~6	ESF	1yr	Mild	Harsh	No (1)	M	I	
25	VWS-TCV-402	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
26	VWS-TCV-412	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
27	VWS-TCV-422	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
28	VWS-TCV-432	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
29	VWS-TCV-502	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
30	VWS-TCV-512	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
31	VWS-TCV-522	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
32	VWS-TCV-532	Chilled Water Control Valve	R/B	8	ESF	1yr	Mild	Harsh	No (1)	M	I	
33	VWS-TCV-542	Chilled Water Control Valve	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
34	VWS-TCV-552	Chilled Water Control Valve	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
35	VWS-TCV-562	Chilled Water Control Valve	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
36	VWS-TCV-572	Chilled Water Control Valve	PS/B	9	ESF	1yr	Mild	Mild	No (1)	M	I	
37	VWS-TCV-582	Chilled Water Control Valve	R/B	7	ESF	1yr	Mild	Harsh	No (1)	M	I	
38	(Deleted)											
39	(Deleted)											
40	VWS-TCV-592	Chilled Water Control Valve	R/B	7	ESF	1yr	Mild	Harsh	No (1)	M	I	
41	VWS-TCV-602A	Chilled Water Control Valve	R/B	7	ESF	1yr	Mild	Harsh	No (1)	M	I	
42	VWS-TCV-602B	Chilled Water Control Valve	R/B	7	ESF	1yr	Mild	Harsh	No (1)	M	I	

Tier 2

Chapter 4

Chapter 4 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_04.04-43	Table 4.1-1 (Sheet 2 of 3)	4.1-7	Response to RAI No. 994 MHI Letter No. UAP-HF-13156 Date 07/05/2013	Revised minimum DNBR for thimble channel and hot channel to show changes in CHF correlation of uncertainty value as discussed in RAI response.	-
DCD_04.04-43	4.4.1.1.2	4.4-2	Response to RAI No. 994 MHI Letter No. UAP-HF-13156 Date 07/05/2013	Revised minimum DNBR for thimble channel and hot channel to show changes in CHF correlation of uncertainty value as discussed in RAI response.	-
DCD_04.04-43	Table 4.4-1 (Sheet 2 of 2)	4.4-31	Response to RAI No. 994 MHI Letter No. UAP-HF-13156 Date 07/05/2013	Revised minimum DNBR for thimble channel and hot channel to show changes in CHF correlation of uncertainty value as discussed in RAI response.	-
DCD_04.04-44	4.4.5.4 4.4.7	4.4-25 4.4-28	Response to RAI No. 1063 MHI Letter No. UAP-HF-13300 Date 12/10/2013	Section 4.4.5.4 in DCD Rev.4 was removed to manage design limits of Min. DNBR as COL item.	-

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Tier 2

Chapter 5

Chapter 5 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_06.02.02-94	5.4.7.2.2.2	5.4-39	Response to RAI No. 1036 MHI Letter No. UAP-HF-13186 Date 07/16/2013	Added description regarding UA value and fouling factor.	-
DCD_09.01.02-46	5.4.7.2.3.6	5.4-47	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Added the description regarding operating procedures.	-
DCD_09.01.02-46	5.4.14	5.4-96	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Added Reference 5.4-27.	-
DCD_05.04.12-2	5.4.12.3	5.4-91	Response to RAI No. 762 MHI Letter No. UAP-HF-14007 Date 01/27/2014	Revised to reflect the NRC staff feedback requesting procedures be developed for RCS high point venting in order to satisfy SRP Section 05.04.12 Acceptance Criteria.	-
DCD_05.04.07-16 S02	5.4.7.2.3.6	5.4-46	Response to RAI No. 998 amended 02 MHI Letter No. UAP-HF-	The term, “sufficiently full of water” is clarified using wording similar to the bases	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			14010 Date 02/04/2014	of TS SR 3.9.6.4. Survey of RHRS for accumulated gas will be performed following Low level mid-loop pump pre-operational testing.	

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

Tier 2

Chapter 6

Chapter 6 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_06.02.02-94	6.2.2.2.2	6.2-43	Response to RAI No. 1036 MHI Letter No. UAP-HF-13186 Date 07/16/2013	Added description regarding fouling factor.	-
DCD_06.02.01-21 S02	6.2.1.1.3.5	6.2-17 6.2-18	Response to RAI No. 923 amended 02 MHI Letter No. UAP-HF-14006 Date 1/17/2014	Added the description and the assumptions for external pressure calculation.	0
DCD_06.03-112 S01	6.2.2.3.2 6.2.2.3.3 Table 6.2.2-4	6.2-52 6.2-54 6.2-205	Response to RAI No. 997 MHI Letter No. UAP-HF-13219 Date 09/05/2013	Changed Tier2 * designation related to debris amount input for GSI-191 issue.	0
MIC-04-06-00001	Table 6.2.2-2 (Sheet 11 of 16)	6.2-195	Editorial	Revised the Table 6.2.2-2 “US-APWR ” rows.	0
MIC-04-06-00001	Table 6.2.4-3 (Sheet 6 of 15)	6.2-213	Editorial	Revised the Table 6.2.4-3 for Pen NO. “P249” and, “P232” rows.	0
MIC-04-06-00002	Figure 6.2.1-70	6.2-294	Editorial correction	Changed location of elevation -9’-2” (It was indicated that the elevation of the PCCV bottom liner is elevation -9’-2” in the Rev.4, but the elevation -9’-2”	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				should be the bottom elevation of the Reactor Cavity.)	

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

heat transfer rate. The condensing heat transfer coefficients as a function of time for the most severe cold leg (pump suction), hot leg, and steam line pipe breaks are graphically illustrated in Figure 6.2.1-66 through Figure 6.2.1-68.

Table 6.2.1-11 lists selected key events and the times at which they occur following initiation of the transient for the most severe RCS pump suction pipe break. Table 6.2.1-12 lists the distribution of energy at various locations within the containment prior to the event and at certain key times during the transient. Figure 6.2.1-84 provides a graphic display of the integrated energy content of the containment atmosphere and recirculation water, as functions of time. This figure includes also the integrated energy absorbed by the structural heat sinks and removed by the containment spray heat exchangers.

Table 6.2.1-13, Table 6.2.1-14 and Figure 6.2.1-85 provide similar data for the most severe hot leg pipe breaks. As for the steam line break analyses, Table 6.2.1-15 and Table 6.2.1-16 list selected key events for the cases giving the highest containment pressure and the highest containment atmospheric temperature, respectively.

The model utilized in the GOTHIC code for determining the distribution of mass and energy from the postulated breaks in the containment atmosphere and sump can be summarized as follows:

- When the liquid temperature from the break is higher than the saturation temperature in the containment at the total pressure, then liquid from the break is assumed to boil and be divided into the saturated steam and the saturated liquid.
- The separated liquid is injected as droplets with a diameter of 0.004 in. This diameter is small enough to ensure that the droplets reach thermal equilibrium with the containment atmosphere before entering the liquid phase at the bottom of the containment. This assumption maximizes the amount of steam generated from the break flow.

The instrumentation provided to monitor and record containment pressure, temperature, and RWSP water temperature during the course of an accident within the containment is described in Section 7.5.

6.2.1.1.3.5 External Pressure Analysis

In the event of inadvertent spray actuation, PCCV would depressurize until the air becomes approximately the temperature of the spray. A calculation was performed to calculate the maximum outside to inside differential-pressure. The pressure differential after inadvertent spray actuation was calculated based on the gas state equation commonly referred to as Charles' Law. DCD_06.02.01-21 S02

The following conditions were assumed:

a. The air temperature inside PCCV is initially 120°F, which maximizes the temperature differential between the containment atmosphere and the spray, which is at a temperature of 32°F

b. The PCCV pressure is at –0.3 psig DCD_06.02.01-21 S02

c. The relative humidity is at a maximum value of 100%

d. The heat exchange through the PCCV wall is not considered for conservatism. DCD_06.02.01-21 S02

e. The free volume inside the PCCV does not change after inadvertent spray actuation.

As the air temperature is reduced, the partial pressure of air decreases from 12.692 psia to 10.765 psia. The steam partial pressure decreases from 1.704 psia to 0.089 psia as the spray condensates steam and cools the atmosphere.

A PCCV pressure of 10.854 psia is produced, causing a differential pressure of 3.842 psig across PCCV, which is lower than the design external differential pressure.

6.2.1.2 Containment Subcompartments

Several reactor system components are located within subcompartments in the containment vessel. High-energy lines are routed inside the subcompartments, such as the branch lines from the reactor coolant piping, feedwater piping, and steam generator blowdown lines.

6.2.1.2.1 Design Basis

To comply with GDC 4 and 50 of 10 CFR 50, Appendix A (Ref. 6.2-14), subcompartments within the containment are designed to withstand the transient differential pressures due to a postulated pipe break.

The US-APWR has the following subcompartments inside the containment:

- Reactor cavity
- Steam generator (SG) subcompartments
- Pressurizer subcompartment
- Pressurizer surge piping room (Underneath the pressurizer subcompartment, EL. 25 ft.- 3 in.)
- Pressurizer spray valve room (South side of the pressurizer subcompartment, EL. 50 ft.- 2 in.)
- Regenerative heat exchanger room (Northwest side of the SG subcompartment, EL. 50 ft.- 2 in.)
- Letdown heat exchanger room (South side of the pressurizer subcompartment, EL. 50 ft.- 2 in.)

metal jackets are provided with quick-release latches, closure handles and positive-lock type latches as required.

- Anti-sweat Insulation forms a system comprised of pre-fabricated units (modules or panels) engineered as integrated assemblies to fit the insulated surface. This insulation is held in place with sealant or equivalent.

As discussed in Subsection 6.1.2, DBA-qualified epoxy coatings are applied in the containment in accordance with RG 1.54 (Ref. 6.2-41).

Programmatic controls will be established to ensure that potential sources of debris introduced into containment (e.g., insulation, coatings, foreign material, aluminum), and plant modifications, will not adversely impact the ECC/CS recirculation function. These programmatic controls will be established consistent with guidance provided in RG 1.82, Rev. 3 (Ref. 6.2-23), in order to ensure that potential quantities of post-accident debris are maintained within the bounds of the analyses and design bases that support Emergency Core Cooling (ECC) and Containment Spray (CS) recirculation functions and to ensure that the long term core cooling requirements of 10 CFR 50.46 are met. Table 6.2.2-2 presents a comparison of the RWSP sump strainer design to the guidance of RG 1.82. Also, refer to Subsection 6.2.2.3.12 and 6.2.2.3.13, “Downstream Effects – In-Vessel/Ex-Vessel.”

The following is a summary of the programmatic controls that will be implemented to ensure that activities are conducted in a manner that ensures ECC/CS strainer operation, and limits the quantity of latent (unintended dirt, dust, paint chips, and fibers) and miscellaneous (tape, tags, stickers) debris inside containment:

- Preparation of a cleanliness, housekeeping and foreign materials exclusion program. This program addresses latent and miscellaneous debris inside containment (Ref. 6.2-40). An acceptance criterion below the conservative assumption of ~~[~~200 lbs~~]*~~ for latent debris (unintended dirt, dust, paint chips, and fibers which principally consist of fiber and particulate debris) inside containment will be established consistent with MUAP-08001-P Sump Strainer Performance Evaluation (Ref. 6.2-34). The program will also ensure that the quantity of miscellaneous debris in containment will be limited such that the allocated *[200 ft^2]** strainer surface area per sump margin per MUAP-08001-P, will be met to ensure ECC/CS strainer operation. A cleanliness, housekeeping and foreign materials exclusion program will be established by the COL Applicant. DCD_06.03-112 S01

- Procedures will be implemented to ensure administrative controls are established for regulatory and quality requirements, for plant modifications and temporary changes, which include consideration of debris source term (i.e., RMI insulation, fiber insulation, inventory of: aluminum, latent debris and miscellaneous debris) introduced into the containment that could contribute to sump strainer blockage. The procedure will ensure that the quantity of RMI and fiber insulation within the ZOIs will be consistent with the design basis debris described in the Table 6.2.2-4, and will ensure that the aluminum in containment exposed to containment spray water is limited to equal or less than 810 ft^2. Included will be requirements for controlling temporary modifications to systems, structures and components

- No design fiber insulation debris is generated within the ZOI. As an operational margin for future plant modification, fiber insulation debris is assumed and included in the strainer design.

- For coating debris, the generated debris volume is based on the surface area for the ZOI from the main coolant pipe break and a conservative coating thickness. As an operational margin for the plant, an additional amount of coating debris is assumed and included in the strainer design.

For latent debris, [200 lbs]* of fiber and particulate is applied, as recommended in the guidance (Ref. 6.2-24). Specific material types for miscellaneous debris, such as tapes, tags or stickers, reaching the strainer are not specified. Instead, a *[200 ft^2]** penalty of sacrificial strainer surface area per sump is considered as a margin for future detailed design and installation. These debris sources are controlled by the foreign material exclusion program that will be established by the plant owner. DCD_06.03-112 S01

The design basis debris for sump strainer performance is summarized in Table 6.2.2-4. More detailed information is provided in the Sump Strainer Performance Evaluation document (Ref. 6.2-34).

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

6.2.2.3.4 Debris Characteristics

The US-APWR assumes that all fiber debris within the ZOI is "fines". The specification of debris characteristics used for the sump performance evaluation is determined based on the SE of NEI 04-07 (Ref. 6.2-24). The SE classified fibrous debris into four groups as follows:

1. fines that remain suspended,

2. small piece debris that are transported along the floor,

3. large piece debris with the insulation exposed to potential erosion, and

4. large debris with the insulation undamaged but still protected by a covering and thereby preventing erosion.

Fine fiber debris is considered suspended and transportable to the strainer. The post-LOCA 30-day erosion of small fiber debris into fines does not require consideration, because all fiber debris is already assumed to be fine.

RMI insulation debris is assumed to consist of 75 percent small fines and 25 percent large pieces, in accordance with the SE of NEI 04-07 (Ref. 6.2-24). The RMI debris is considered as "non-suspended" in the sump pool due to its specific gravity. For RMI debris characterization, the effect of erosion during the 30 days of post-LOCA operation is not required.

Table 6.2.2-2 Comparison of RWSP Recirculation Intake Debris Strainer Design to RG 1.82 Requirements (Sheet 11 of 16)

No.	Regulatory Position	US-APWR Design
1.3.2.2	An acceptable method for estimating the amount of debris generated by a postulated LOCA is to use the zone of influence (ZOI). Examples of this approach are provided in NUREG/CR-6224 and Boiling Water Reactor Owners' Group (BWROG) Utility Resolution Guidance (NEDO-32686 and the staffs Safety Evaluation on the BWROG's response to NRC Bulletin 96-03). A representation of the ZOI for commonly-used insulation materials is shown in Figure 3. The size and shape of the ZOI should be supported by analysis or experiments for the break and potential debris. The size and shape of the ZOI should be consistent with the debris source (e.g., insulation, fire barrier materials) damage pressures, (i.e., the ZOI should extend until the jet pressures decrease below the experimentally determined damage pressures appropriate for the debris source). The volume of debris contained within the ZOI should be used to estimate the amount of debris generated by a postulated break. The size distribution of debris created in the ZOI should be determined by analysis or experiments. The shock wave generated during the postulated pipe break and the subsequent jet should be the basis for estimating the amount of debris generated and the size or size distribution of the debris generated within the ZOI. Certain types of material used in a small quantity inside the containment can, with adequate justification, be demonstrated to make a marginal contribution to the debris loading for the ECC sump. If debris generation and debris transport data have not been determined experimentally for such material, it may be grouped with another, like material existing in large quantities. For example, a small quantity of fibrous filtering material may be grouped with a substantially large quantity of fibrous insulation debris, and the debris generation and transport data for the filter material need not be determined experimentally. However, such analyses are valid only if the small quantity of material treated in this manner does not have a significant effect when combined with other materials (e.g., a small quantity of calcium silicate combined with fibrous debris).	The debris generated by a postulated pipe break is estimated by applying the ZOI(s) corresponding to debris types as recommended in SE of the NEI 04-07 methodology. A reduced ZOI for protective coating (Ref. 6.2-51 and 6.2-52) is applied for coating debris generation. Debris generation is addressed in subsection 6.2.2.3.3. Further detail is discussed in the US-APWR Sump Strainer Performance document (Ref. 6.2-34).

MIC-04-06-00001

Table 6.2.2-4 Design Basis Debris

Type		Amount
RMI (Transco)		106 (ft^3)
Fibrous Insulation (NUKON™)		0.0 (ft^3) (1)
Coating (Epoxy)		3.0 (ft^3) (2)
Latent Debris [(200 lbm)]*	Fiber (15%)	*[30 (lbm)]**
	Particle (85%)	*[170 (lbm)]**
Miscellaneous Debris		*[200 ft^2 strainer surface area per sump]**
Chemical debris	Aluminum Hydroxide	300 (lbm)
	Sodium Aluminum Silicate	330 (lbm)

Note: The following debris is included as operational margin, in addition to the amounts above:
(1) *[1.875 (ft^3)]** of fiber debris
(2) 200 (lbs) of coating debris

DCD_06.03-112 S01

DCD_06.03-112 S01

Information in this table that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2. Any change to this information requires prior NRC approval.*

Table 6.2.4-3 List of Containment Penetrations and System Isolation Positions (Sheet 6 of 15)

Pen NO.	GDC	System Name	Fluid	Line Size (in.)	ESF or Support System	Valve Arragmt Figure 6.2.4-1	Valve Number	Location of Valve	Type Tests	Type C Test	Length of Pipe (Note 1)	Valve: Type	Valve: Operator	Actuation Mode: Primary	Actuation Mode: Secondary	Valve Position: Normal	Valve Position: Shutdown	Valve Position: Post-Accident	Power Failure	Actuation Signal	Valve Closure (seconds)	Power Source	Remark
P405L	56	CSS	Silicone Oil	3/4	Yes	Sht. 17	-	-	A	N	-	-	-	-	-	-	-	-	-	-	-	-	Note 8
P416	56	CSS	Silicone Oil	3/4	No	Sht. 17	-	-	A	N	-	-	-	-	-	-	-	-	-	-	-	-	Note 8
P234	56	CCWS	Water with corrosion inhibitor	8	Yes	Sht. 19	NCS-VLV-403A	In	C	Y	-	Check	Self	Auto	None	-	-	-	NA	NA	NA	NA	Note 9
				8			NCS-MOV-402A	Out			10.0 ft	Gate	Motor	RM	Manual	O	O	O	FAI	NA	40	1E	
																					~~20~~	~~1E~~	
				3/4			NCS-VLV-452A	In			-	Globe	Manual	Manual	None	C	C	C	NA	NA	NA	NA	
P249	56	CCWS	Water with corrosion inhibitor	8	Yes	Sht. 19	NCS-VLV-403B	In	C	Y	-	Check	Self	Auto	None	-	-	-	NA	NA	NA	NA	Note 9
				8			NCS-MOV-402B	Out			10.0 ft	Gate	Motor	~~Auto~~RM	~~RM~~Manual	O	O	~~C~~O	FAI	~~P~~NA	40	1E	
				4			~~NCS-MOV-445B~~	~~Out~~				~~Globe~~	~~Motor~~	~~Manual~~	~~None~~	~~C~~	~~C~~	~~O~~	~~FAI~~	~~NAI~~	~~20~~	~~1E~~	
				3/4			NCS-VLV-452B	In			-	Globe	Manual	Manual	None	C	C	C	NA	NA	NA	NA	
P232	56	CCWS	Water with corrosion inhibitor	8	Yes	Sht. 20	NCS-MOV-436A	In	C	Y	-	Gate	Motor	~~Auto~~RM	~~RM~~Note	O	O	~~C~~O	FAI	~~P~~NA	40	1E	Note 9
				8			NCS-MOV-438A	Out			10.0 ft	Gate	Motor	~~Auto~~RM	~~RM~~Manual	O	O	~~C~~O	FAI	~~P~~NA	40	1E	
				4			~~NCS-MOV-447A~~	~~In~~				~~Globe~~	~~Motor~~	~~Manual~~	~~None~~	~~C~~	~~C~~	~~O~~	~~FAI~~	~~NA~~	~~20~~	~~1E~~	
				4			~~NCS-MOV-448A~~	~~Out~~				~~Globe~~	~~Motor~~										
				3/4			NCS-VLV-437A	In			-	Check	Self	Auto	None	-	-	-	NA	NA	NA	NA	
P251	56	CCWS	Water with corrosion inhibitor	8	Yes	Sht. 20	NCS-MOV-436B	In	C	Y	-	Gate	Motor	RM	None	O	O	O	FAI	NA	40	1E	Note 9
				8			NCS-MOV-438B	Out			10.0 ft	Gate	Motor	RM	Manual	O	O	O	FAI	NA	40	1E	
				3/4			NCS-VLV-437B	In			-	Check	Self	Auto	None	-	-	-	NA	NA	NA	NA	
P233	57	CCWS	Water with corrosion inhibitor	4	No	Sht. 21	NCS-MOV-511	Out	A	N	9.0 ft	Gate	Motor	Auto	RM	O	O	C	FAI	T	20	1E	Note 5
P235	57	CCWS		4	No	Sht. 21	NCS-MOV-517	Out	A	N	9.0 ft	Gate	Motor	Auto	RM	C	C	C	FAI	T	20	1E	Note 5
P252	57	CCWS		8	No	Sht. 22	NCS-MOV-531	Out	A	N	9.0 ft	Gate	Motor	Auto	RM	O	O	C	FAI	T	40	1E	Note 5
P250	57	CCWS		8	No	Sht. 22	NCS-MOV-537	Out	A	N	9.0 ft	Gate	Motor	Auto	RM	O	O	C	FAI	T	40	1E	Note 5
P276R	56	WMS	Gas	3/4	No	Sht. 23	LMS-AOV-052	In	C	Y	-	Dia	Air	Auto	RM	O	O	C	FC	T	15	1E	Note 9
				3/4			LMS-AOV-053	Out			11.0 ft	Dia	AIr	Auto	RM	C	C	C	FC	T	15	1E	
P284	56	WMS	Gas	2	No	Sht. 24	LMS-AOV-055	In	C	Y	-	Dia	Air	Auto	RM	O	O	C	FC	T	15	1E	Note 9
				2			LMS-AOV-056	Out			16.0 ft	Dia	Air	Auto	RM	O	O	C	FC	T	15	1E	
				2			LMS-AOV-060	Out			-	Dia	AIr	Auto	RM	O	O	C	FC	T	15	1E	
P205	56	WMS	Borated Water	3	No	Sht. 25	LMS-LCV-010A	In	C	Y	-	Dia	Air	Auto	RM	C	C	C	FC	T	15	1E	Note 9
				3			LMS-LCV-010B	Out			9.0 ft	Dia	Air	Auto	RM	O	O	C	FC	T	15	1E	

MIC-04-06-0 0001

MIC-04-06-0 0001

MIC-04-06-00002

Security-Related Information - Withheld Under 10 CFR 2.390

Figure 6.2.1-70 Reactor Cavity Sectional View

Tier 2

Chapter 7

Chapter 7 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_07.09-23 S03	7.9.2.6	7.9-8	Response to Amended RAI No. 710 MHI Letter No. UAP-HF-13158 Date 11/01/2013	Deleted Subsection 7.9.2.6.	-
DCD_07.01-45	ACRONYMS AND ABBREVIATIONS 7.1 7.1.2 7.1.3.13 7.1.3.17 7.1.3.18 7.9.1.5 7.9.2.2	7-xvii 7.1-1 7.1-3 7.1-7 7.1-14 7.1-16 7.9-4 7.9-6	Response to RAI No. 995 MHI Letter No. UAP-HF-13254 Date 11/11/2013	Revised ACRONYMS AND ABBREVIATIONS, Section 7.1, Subsections 7.1.2, 7.1.3.13, 7.1.3.17, 7.1.3.18, 7.9.1.5 and 7.9.2.2.	-
DCD_19-595	7.7.1.14 (New)	7.7-18	Response to RAI No. 1061 MHI Letter No. UAP-HF-13305 Date 12/12/2013	Added Subsection 7.7.1.14 (Monitoring and Alarm for Control Systems).	-
DCD_07.09-27	7.1.3.11 7.9.2.7	7.1-15 7.9-10	Response to RAI No. 1076 MHI Letter No. UAP-HF-14016 Date 2/25/2014	Revised Subsections 7.1.3.11 and 7.9.2.7.	-
MIC-04-07-00001	Acronyms and Abbreviations 7.1.3.10	7-xvi 7-xvii 7-xviii 7.1-14	Response to ACRS Subcommittee Questions on April 25-26,	Revised Acronyms and Abbreviations. Revised	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	7.1.3.16	[7.1-15] 7.1-20 [7.1-20, 7.1-21]	2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	subsections 7.1.3.10, 7.1.3.16, 7.1.4.1.1, 7.4.1.2.1, and Figure 7.1-8.	
	7.1.4.1.1	7.1-23			
	7.1.4.2.1	7.1-32			
	Figure 7.1-8 (New)	7.1-68 [7.1-69]			
	7.3.1.2.5(New)	7.3-5		Revised subsections 7.3.1.2.5, 7.3.1.8, 7.3.5, and Figure 7.3-1.	
	7.3.1.8	7.3-15			
	7.3.5	7.3-20			
	Figure 7.3-1	7.3-33			
	7.5.1.1	7.5-2		Revised subsections 7.5.1.1, 7.5.1.1.3.2, and Figure 7.5-4.	
	7.5.1.1.3.2	7.5-5			
	Figure 7.5-4	7.5-34 [7.5-38]			
	7.6.3	7.6-9		Revised subsection 7.6-9.	
	7.7.1.1.11.3	7.7-11		Revised subsection 7.7.1.1.11.3.	
	7.8	7.8-1 [7.8-1, 7.8-2]		Revised subsections 7.8, 7.8.1.1.1, 7.8.1.2.1, 7.8.2.9, 7.8.3.2, 7.8.5, Table 7.8-7, Table 7.8-10, and Table 7.8-11.	
	7.8.1.1.1	7.8-2 [7.8-2, 7.8-3]			
	7.8.1.2.1	7.8-5			
	7.8.2.9	7.8-9 [7.8-9, 7.8-10]			
	7.8.3.2	7.8-10			
	7.8.5	[7.8-11, 7.8-12]			
	Table 7.8-7 (Sheets 2,4 of 6)	7.8-17 7.8-21		Revised	

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	Table 7.8-10 (New) Table 7.8-11 (New) 7.9.1.6 7.9.1.7 7.9.2.3.5 7.9.2.5	7.8-23 [7.8-26, 7.8-27 through 7.8-29] 7.9-6 7.9-7 7.9-9		subsections 7.9.1.6, 7.9.1.7, 7.9.2.3.5, and 7.9.2.5.	
MIC-04-07-00003	7.1.4 Figure 7.1-1	7.1-22 [7.1-23] 7.1-62 [7.1-63]	Editorial	Changed “human system interface” to “human-system interface”. Changed “Human System Interface” to “Human-System Interface”.	0
MIC-04-07-00005	7.3.1.2	7.3-3	Editorial	Changed “withinrooms” to “within rooms”.	0
MIC-04-07-00006	7.3.1.5.9	7.3-11	Editorial	Changed “safety-related function” to “safety function”.	0
MIC-04-07-00010	Table 7.4-1 (Sheet 1 of 6)	7.4-12	Editorial correction.	The descriptions about valve position of Safety Depressurization Valve and Safety Depressurization Valve Block Valve are deleted. The description about spurious open of Safety Depressurization Valve is deleted.	0
DCD_07.05-18 S02	Table 7.4-2 7.5.1.1 7.5.1.4 Table 7.5-3	7.4-18 7.4-19 7.5-1 7.5-2 7.5-11 [7.5-11	Response to RAI No. 568 amended 02 MHI Letter No. UAP-HF-13223 Date	Revised Table 7.4-2. Revised subsections 7.5.1.1, 7.5.1.4,	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	Table 7.5-5 through Table 7.5-10 Table 7.8-2	7.5-12] 7.5-21 [7.5-22] through 7.5-23 [7.5-25] 7.5-25 [7.5-27] through 7.5-30 [7.5-33] 7.8-11, [7.8-13]	09/11/2013	and Table 7.5-3. Revised Table 7.5-5, Table 7.5-6, Table 7.5-7, Table 7.5-8, Table 7.5-9, Table 7.5-10, and Table 7.8-2.	
DCD_07.07-33	7.7 7.7.2.3 7.7.2.4	7.7-1 7.7-20	Response to RAI No. 996 MHI Letter No. UAP-HF-13244 Date 11/1/2013	Revised Section 7.7 and Subsections 7.7.2.3 and 7.7.2.4.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

ACRONYMS AND ABBREVIATIONS (CONTINUED)

DNB	departure from nucleate boiling
E/O	electrical to optical (or optical to electrical)
ECCS	emergency core cooling system
EFW	emergency feedwater
EFWS	emergency feedwater system
EHGS	turbine electro-hydraulic governor control system
EMI	electromagnetic interference
EOF	emergency operations facility
EOP	emergency operating procedure
EPG	emergency procedure guideline
ERDS	emergency response data system
ESF	engineered safety features
ESFAS	engineered safety features actuation system
ESW	essential service water
ESWS	essential service water system
FLB	feedwater line break
FMEA	failure modes and effects analysis
FPGA	Field Programmable Gate Array
F-ROM	Flash Electrically Erasable Programmable Read Only Memory
GDC	General Design Criteria
GTG	gas turbine generator
HEPA	high-efficiency particulate air
HFE	human factors engineering
HJTC	heated junction thermocouple
HSI	human-system interface
HSIS	human-system interface system
HVAC	heating, ventilation, and air conditioning
I&C	instrumentation and control
I/O	input/output
IAS	instrument air system
ICC	inadequate core cooling
IEEE	Institute of Electrical and Electronics Engineers
ITAAC	inspections, tests, analyses, and acceptance criteria
ITV	industrial television
IV	intercept valve MIC-04-07-00001
LBLOCA	large break loss-of-coolant accident
LCSR	loop current step response
LDP	large display panel

ACRONYMS AND ABBREVIATIONS (CONTINUED)

LOCA	loss-of-coolant accident
LOOP	loss of offsite power
MCR	main control room
~~MELCO~~	~~Mitsubishi Electric Corporation~~ DCD_07.01-45
MELTAC	Mitsubishi Electric Total Advanced Controller
MFW	main feedwater
M/G	motor generator
MHI	Mitsubishi Heavy Industries, Ltd.
MOV	motor operated valve
MSLB	main steam line break
MSS	main steam supply system
MTCV	main turbine control valve MIC-04-07-00001
NEI	Nuclear Energy Institute
NIS	nuclear instrumentation system
NRC	U.S. Nuclear Regulatory Commission
NUREG	NRC Technical Report Designation (Nuclear Regulatory Commission)
OC	operator console
OEM	original equipment manufacturer
OPC	overspeed protection controller MIC-04-07-00001
OS	operating system
O-VDU	operational VDU
PA	postulated accident
PAM	post accident monitoring
PCMS	plant control and monitoring system
PIF	power interface
POL	problem oriented language
PRA	probabilistic risk assessment
PSMS	protection and safety monitoring system
PSS	process and post-accident sampling system
QA	quality assurance
QAP	quality assurance program
RCP	reactor coolant pump
RCS	reactor coolant system
RFI	radio frequency interference
RG	Regulatory Guide
RHR	residual heat removal
RHRS	residual heat removal system
RMS	radiation monitoring system

ACRONYMS AND ABBREVIATIONS (CONTINUED)

RSR	remote shutdown room
RT	reactor trip
RTB	reactor trip breaker
RTD	resistance temperature detector
RTP	rated thermal power
RV	reactor vessel
RVWL	reactor vessel water level
RWSP	refueling water storage pit
SBLOCA	small break loss-of-coolant accident
SDCV	spatially dedicated continuously visible
SG	steam generator
SGTR	steam generator tube rapture
SIP	safety injection pump
SIS	safety injection system
SLS	safety logic system
SPDS	safety parameter display system
SPM	Software Program Manual
SRM	staff requirements memorandum
SRP	Standard Review Plan
SRSS	square root sum of the squares
SSA	signal selection algorithm
S-VDU	safety VDU
T_{avg}	average temperature
T_{cold}	cold temperature
T_{hot}	hot temperature
TSC	technical support center
UHS	ultimate heat sink
UPS	uninterruptible power supply
UV-ROM	Ultra-Violet Erasable Programmable Read Only Memory
VCT	volume control tank
V&V	verification and validation
VDU	visual display unit
WDT	watchdog timer

MIC-04-07-00001

7.1.3.10 Self-Diagnosis Function

The integrity of digital I&C components is continuously checked by their self-diagnostic features which consist of software based detection functions and hardware based detection circuits, such as watchdog timers (WDTs). These self-diagnostic features result in early detection of failures and allow on-line repair that improves system availability. Information about detected failures is gathered through networks and provided to maintenance staff in a comprehensive manner. In addition, the self-diagnostic features control If any failures that disable safety functions are detected by these self-diagnostic features, alarms are generated in the MCR and safety-related signals are forced into a predetermined safe status, such as, "fail-safe" for reactor trip signals and "fail as-is" for the ESF actuation signals as shown in Figure 7.1-8. Lower priority alarms are generated in the MCR for other failures that do not disable the safety functions, such as a failure of one controller in a parallel redundant pair; where a redundant controller configuration, to maintain all system functions, is employed to maintain all system functions even in the presence of failures. The self-diagnosis is always working in the digital control system but does not affect system operation. Therefore, there is no impact to channel independence, system integrity and compliance to the single failure criterion during self-testing. MIC-04-07-00001 MIC-04-07-00001

There are numerous self-diagnostic functions and WDT functions within the different modules of the MELTAC digital platform. Each WDT is continuously reset (avoiding timeout) based on the cyclical execution of the module's function. A WDT times out when the cyclical execution is interrupted, indicating a failure. A WDT timeout within one module is detected by another module in the same controller or in another controller through loss of data communication with the failed module. This other module/controller then generates an alarm signal for the failure. The details of the self-diagnostic functions and the WDTs are described in MUAP-07005 Subsection 4.1.5. MIC-04-07-00001

Continuous self-diagnostic features allow elimination of most of the manual surveillance testing required for technical specification compliance. Manual testing and manual calibration verification are specifically provided for functions with no self-diagnosis. The integrity of the self-diagnosis is confirmed by a periodic manually initiated memory integrity check, which includes the software memory which is used for self-diagnosis. For PSMS, this software memory check requires temporarily connecting each PSMS controller to the Maintenance Network. When a PSMS controller is connected to the Maintenance Network, it is considered inoperable. The functions affected by an inoperable controller are managed by plant technical specifications. PCMS controllers are permanently connected to the Maintenance Network.

In addition, when I/O is checked by manual sensor calibration and output actuation of plant components, the digital components which are self-tested are also re-checked. This provides manual confirmation for the integrity of all digital functions. The coverage of self-diagnosis and manual test is described in MUAP-07004 Sections 4.3 and 4.4. MUAP-07005 Subsection 4.1.5.1 describes self-diagnosis. The self-testing is provided for MELTAC components of PSMS, with the exception of the conventional circuits within the I/O and PIF modules, and the touch screens of the safety VDU.

As explained above, periodic surveillance tests manually confirm that all program memory instructions are correct, including the memory that controls self-diagnosis. In

7.1.3.15 Information Displays

Details on information displays are presented in Topical Report MUAP-07007, Chapter 18, and Section 7.5.

7.1.3.16 Consideration of Control System Induced Transients

Failures of the PCMS are bounded by the AOOs analyzed in the safety analysis, described in Chapter 15. These PCMS failures are described in Subsection 7.7.2.3. Chapter 8, Subsection 8.3.1.1.11 describes conformance to RG 1.204. This conformance bounds the envelope considered for PCMS EMI susceptibility. The PCMS uses the same hardware as the PSMS, which is qualified to RG 1.180. Therefore, additional lightening induced failures of the PCMS are precluded.

In some cases, it is advantageous to employ signals derived from instrumentation that are also used in the protection trains. This practice reduces the need for separate non-safety instrumentation, which would require additional penetrations into reactor pressure boundaries and introduce the need to additional maintenance in hazardous areas. For each parameter where instrumentation is shared, the PCMS receives four redundant signals from each train of the RPS. The signal selection algorithm (SSA), within the PCMS, receives input from all safety-related process trains but passes only the second highest operable process signal value to the control system's automation algorithms. The reactor control systems also have a modified SSA using an average calculation process. (This average calculation for select signals in the reactor control system is different from the description in MUAP-07004 Subsection 4.2.5.) The SSA excludes process inputs that are failed or taken out of service for maintenance or testing.

The SSA of the PCMS ensures the PCMS does not take erroneous control actions based on a single instrument channel failure or a single RPS train failure. As such, a single failure will not cause the PCMS to take erroneous control actions that challenge the PSMS, while the PSMS is in a degraded operability state due to a failed instrument channel or failed RPS train.

The SSA is continuously tested as follows:

- The PCMS employs the same self-test features as the PSMS. These features are described in Subsection 4.1.5 of MUAP-07005.
- The basic software configuration and application software configuration, within the PCMS controller, is periodically confirmed by the same manually initiated method described in Subsection 4.1.4.1.c of MUAP-07005.

Since the SSA uses only digital values obtained from the PSMS via the unit bus, all functions of the SSA are completely covered by self-testing; no additional manual tests are required. The digital values obtained from the PSMS are confirmed during CHANNEL CALIBRATION for the safety-related sensors.

This SSA within the PCMS allows the RPS to have one instrument channel inoperable or bypassed at all times except the neutron flux monitoring function while still complying with General Design Criteria (GDC) 24 (Reference 7.1-14) and IEEE Std 603-1991 (Reference 7.1-15). As described in the probabilistic risk assessment (PRA) the ~~RPS~~US-APWR MIC-04-07-00001

design meets the plant reliability goals with only three channels in operation except the neutron flux monitoring function. Refer to the PRA Technical Report Attachments 6A.12 and 6A.13 (Reference 7.1-16) for the PSMS model. MIC-04-07-00001

The shared instrumentation signals are interfaced through fiber optic data networks. As such, an electrical fault in the PCMS cannot propagate to the protection channel. Refer to MUAP-07004 Subsection 4.2.5 for additional details.

7.1.3.17 Life Cycle Process

MHI applies its MELCO's safety system fully digital platform for the safety-related I&C system, MELTAC, to the PSMS of the US-APWR. Full details of the life cycle process for the MELTAC safety platform basic software, including quality assurance (QA), management, development, installation, maintenance, training, operation, and the software safety plan are discussed in MUAP-07005 Section 6.0. The life cycle process for the PSMS application software, including QA, management, development, installation, maintenance, training, operation, and the software safety plan are discussed in The US-APWR Software Program Manual (Reference 7.1-18), including BTP 7-14 (Reference 7.1-17) compliance. The life cycle process for the MELTAC platform basic software is described in JEXU-1012-1132, The Basic Software Program Manual (Reference 7.1-35). The US-APWR Software Program Manual (MUAP-07017) also controls the basic software life cycle process of the MELTAC Platform. DCD_07.01-45 DCD_07.01-45

7.1.3.18 Quality Assurance Program

The overall quality assurance program (QAP) for the US-APWR I&C systems is described in Chapter 17. The specific QAP for the MELTAC platform is described in MUAP-07005 Section 6.0. These QAPs address all requirements of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B (Reference 7.1-19), and IEEE Std 7-4.3.2-2003 (Reference 7.1-20). DCD_07.01-45

7.1.3.19 Identification

I&C equipment identification follows the guidance of RG 1.75, which endorses IEEE Std 384-1992 (Reference 7.1-22). The following color coding is provided on tags used for the identification of I&C system cabinets and for stand alone components, such as field instruments.

Identification shall not require frequent use of reference material.

- Train A: Red with white lettering
- Train B: Green with white lettering
- Train C: Blue with white lettering
- Train D: Yellow with black lettering
- Non-safety train: White with black lettering

This color coding is consistent with the color coding defined in Subsection 8.3.1.1.8 identification of class 1E electrical equipment and cables.

1) Reactor protection system (RPS)

2) Engineered safety features actuation system (ESFAS)

3) Safety logic system (SLS)

4) Communication system (COM)

5) Safety-related human--system interface system (HSIS) MIC-04-07-00003

The HSIS includes safety VDU, multidivisional safety VDU and conventional switches for system level manual operation. The safety VDU consists of the safety VDU processor and the safety VDU panel. The PSMS receives inputs from plant instrumentation (e.g., pressure and level transmitters) and generates outputs to control plant components (e.g., pumps, valves, breakers).

The following subsections demonstrate conformance to the four essential safety criteria and one subjective attribute-simplicity above, for the RPS in Subsection 7.1.4.1 and for the ESFAS, SLS, COM and safety-related HSIS in Subsection 7.1.4.2.

7.1.4.1 RPS

The RPS monitors plant instrumentation to detect conditions indicative of the anticipated operational occurrences (AOO) or the postulated accidents (PA). When accident conditions are detected, the RPS initiates a reactor trip by opening reactor trip breakers which removes power to reactor control rods.

7.1.4.1.1 Redundancy

The RPS consists of four redundant and independent trains (train A, B, C and D) as shown in Figure 7.1-1. Normally, four redundant measurements using sensors from four separate trains are made for each variables used for reactor trip. Analog measurements are converted to digital form by separate analog-to-digital converters within the four trains of the RPS. Each train independently generates a partial trip signal for a given parameter if its measurement exceeds its predefined setpoint. Each RPS train sends its own partial trip signal to each of the other three RPS trains over isolated serial data links. Each train will generate a reactor trip signal if any two or more trains of the same variable are in the partial trip state.

The reactor trip signal from each of the four RPS trains is separately sent to a corresponding reactor trip breakers. Each RPS train has two reactor trip breakers. The reactor is tripped when reactor trip signals are generated by any two or more RPS trains.

For the RPS ~~and the PRA safety goals~~, the Single Failure Criterion (IEEE Std 603-1991, Clause 5.1) and the Control-Protection Interaction Criteria (GDC 24 and IEEE Std 603-1991, Clause 5.6.3.3) are met with only three trains in service. Therefore, these requirements are met even when the one RPS train and its corresponding reactor trip breakers are out of service (in a bypass condition, etc). The only exception is the neutron flux measurement channel from the sensor to the RPS input function, and the four trains of these measurement channel in service are required to meet the Single Failure Criterion MIC-04-07-00001

controllers in each of the ESFAS trains. If a specific ESFAS signal actuates two ESF system mechanical trains, the system level ESF initiation signal is transmitted from all RPS trains to controllers in two ESFAS trains. If a specific ESFAS signal actuates four ESF system mechanical trains, the system level ESF initiation signals are transmitted from all RPS trains to controllers in four ESFAS trains. Since the ESFAS supports ESF systems with both two and four mechanical trains, all four RPS trains interface to all four ESFAS trains.

Whether automatically or manually initiated, train level ESFAS initiation signals are transmitted from the four RPS trains to two redundant ESFAS subsystems in each actuated train. Each ESFAS subsystem provides 2-out-of-4 voting logic to redundantly generate system level ESFAS signals to the controllers of the SLS in the same train.

The COM performs communication functions between the PSMS and the PCMS. There is a separate COM system in each PSMS train, which supports the separate trains of the RPS, ESFAS and SLS. There are two COM subsystems, COM-1 and COM-2; each has redundant subsystems.

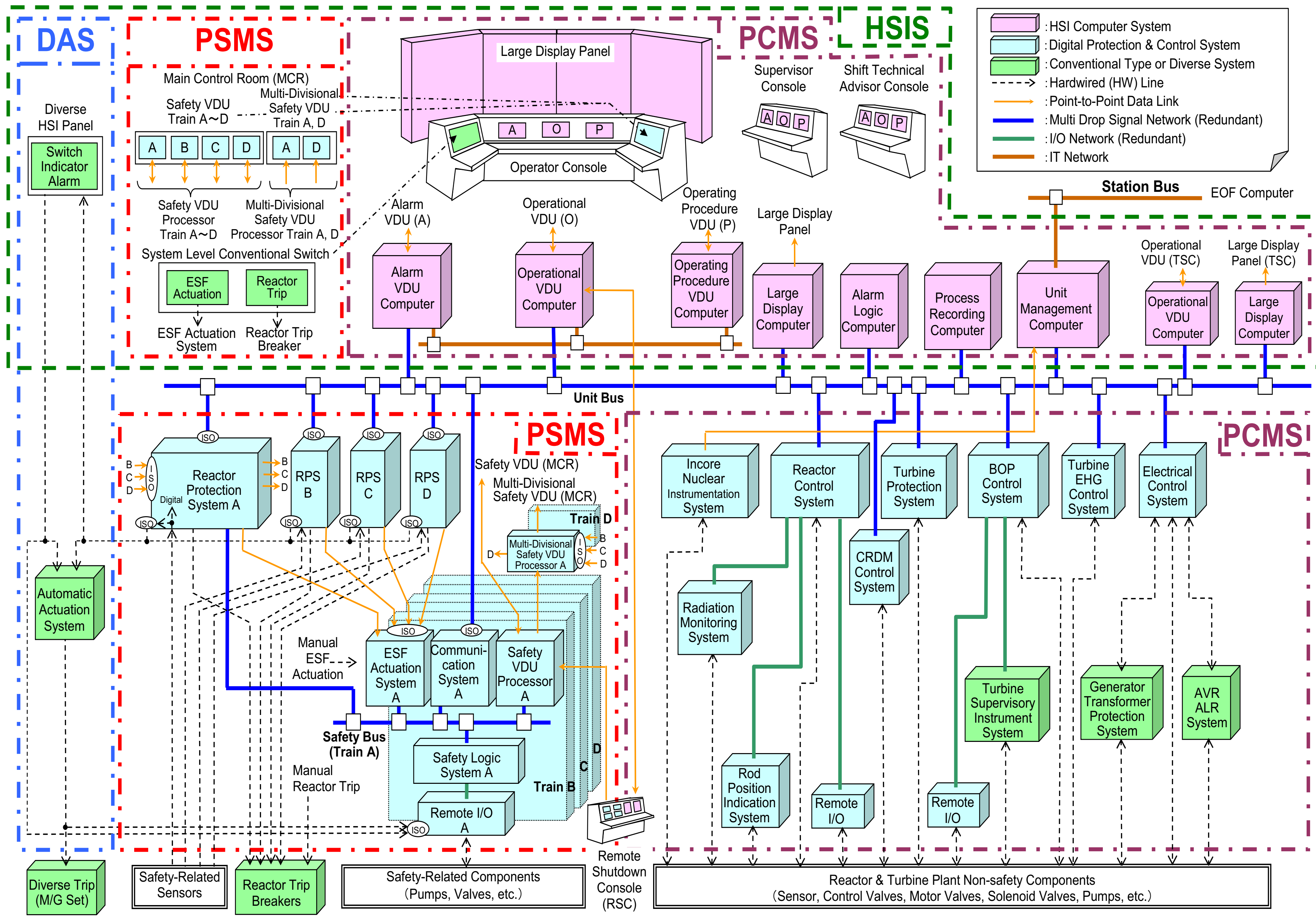
The COM-1 interfaces signals from the ESFAS and the SLS to the PCMS, via the unit bus, for monitoring and control. The safety function of COM-1 is only to provide communication independence from the PSMS to the unit bus; COM-1 performs no safety function logic.

The COM-2 interfaces and combines manual command signals from the operational VDU of the PCMS via the unit bus, with manual command signals from the safety VDU of the same PSMS train. The manual command signals from the COM-2 are interfaced to the RPS, ESFAS and SLS. The safety function of the COM-2 is to provide communication independence between the PSMS and the unit bus, and to provide functional independence between the operational VDU and safety VDU signals. Communication independence and functional independence are described in the sections below.

The SLS combines system level ESFAS actuation signals from the ESFAS and component level ESF manual signals via COM-2 and non-safety control signals from hardwired connections, through logic that establishes priority between automatic and manual demands and priority between non-safety and safety-related signals. Each SLS controller also has two redundant subsystems. The outputs of the redundant subsystems are combined in the power interface (PIF) modules in the SLS, along with control signals from the DAS, to interface with ESF system plant components. Conventional hardwired logics within the PIF module gives priority to any output signal from subsystem 1, subsystem 2 or DAS which demands the safe state of the component (i.e., the state required to execute the ESF system function). The multidivisional safety VDUs receive monitoring signals from all four train safety VDUs and each train multidivisional safety VDU can provide the information of four train critical safety functions for the safe shutdown. Therefore, each multidivisional safety VDU has 100% monitoring capabilities to provide the information to achieve the safety functions for the safe shutdown, and there are only two multidivisional safety VDU trains within the PSMS for the US-APWR.

For the ESF system ~~and the PRA safety goals~~, the Single Failure Criterion (IEEE Std 603-1991, Clause 5.1) are met with only three trains in service, including the train A and D to accommodate two mechanical train systems, for the four train system (the ESFAS, SLS, MIC-04-07-00001

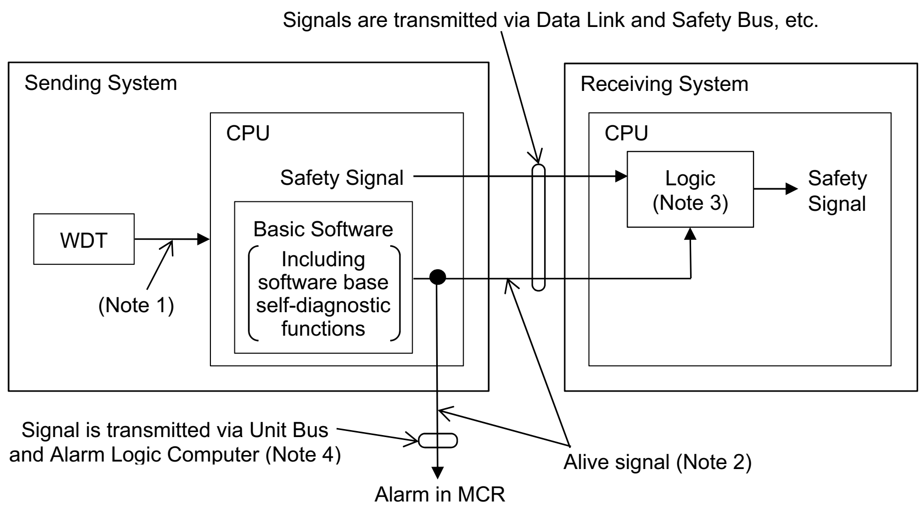
MIC-04-07-00003



DAS : Diverse Actuation System PSMS : Protection and Safety Monitoring System HSIS : Human-System Interface System PCMS : Plant Control and Monitoring System

Figure 7.1-1 US-APWR I&C Overall Architecture

MIC-04-07-00001



Note 1) Detection of the WDT timeout means that the CPU cyclic operation is stopped.
Note 2) The Alive signal is updated normally. The Alive is not updated if the CPU of sending system is stopped.
Note 3) If the Alive signal is not updated, the safety signal is forced in the pre-determined position, such as, "fail safe" for the Reactor Trip signals, and "fail as is" for the ESF actuation signals in the receiving system.

Figure 7.1-8 Self-diagnostic Features

bus. Once the Class 1E GTG is capable of accepting loads, the ESFAS sequences the loads for its train back onto the electrical bus in an order appropriate for the current train level ESF actuation signal(s). The ESFAS sequencing logic accommodates ESF actuation signals occurring prior to or during a loading sequence. The ESFAS load sequencing function is independent for each train. The ESFAS also provides automatic load sequencing when an ESFAS is actuated during normal power conditions (i.e., no LOOP). Logic and interlocks for the ESFAS load sequencing function are described in Subsection 8.3.1.

Safety-related plant components are manually loaded on the non-safety alternate ac power source from the SLS during station blackout (which includes a loss of the Class 1E GTG Power Source).

7.3.1.2 ESF Component Level Logic

The SLS controls safety-related plant components in all trains based on ESF actuation signals, process instrumentation and component level manual actions from the operational VDUs and safety VDUs.

There are four SLS trains in the US-APWR. The SLS consists of multiple controllers in each train. Plant process systems are assigned to controllers based on consideration of maintenance, potential SLS equipment failures, and optimization of controller performance. For consideration on functional assignment of SLS controllers, refer to MUAP-09020 “Function Assignment Analysis for Safety Logic System” (Reference 7.3-11).

Each train of the SLS receives ESF train level actuation demand signals and load sequencing signals from its respective train of the ESFAS. The SLS also receives manual component level control signals from the OC and RSC (safety VDUs and operational VDUs). The SLS also receives process signals from the RPS for interlocks and controls of plant process systems. The system performs the component level control logic for safety-related actuators (e.g., MOVs, solenoid operated valves, and switchgears).

The SLS controllers for each train are located in separate I&C rooms. The system has conventional I/O portions and I/O portions with priority logic to accommodate signals from the DAS. All SLS I/O will be located within rooms maintained in a mild environment condition by the safety-related ventilation system at all times. MIC-04-07-00005

SLS is a microprocessor based system that achieves high reliability through redundancy within each train and microprocessor self-diagnosis, including data communications. The system also includes features to allow periodic testing of functions that are not automatically tested by the self-diagnosis, such as final actuation of safety-related components. Manual periodic tests can be conducted with the plant on-line and without the risk of spurious system level actuation due to single failures during testing.

To enhance reliability, each SLS controller consists of a duplex architecture using redundant CPUs operating in a redundant parallel controller configuration. In The MELTAC Platform Technical Report (Reference 7.3-1), this is referred to as a redundant parallel controller configuration. Each controller of the duplex architecture receives ESF

7.3.1.2.3 Control of Interlocks Important to Safety

The SLS provides interlocks, which operate to reduce the probability of specific events occurring or to verify the state of a safety-related system. These include interlocks to prevent over pressurization of low-pressure systems and interlocks to ensure availability of ESF systems. Interlocks important to safety are discussed in Section 7.6.

7.3.1.2.4 Functional Allocation in SLS Controllers

For Functional Allocation in SLS Controllers, refer to MUAP-09020 "Function Assignment Analysis for Safety Logic System" (Reference 7.3-11).

7.3.1.2.5 Equipment Protection

MIC-04-07-00001

Equipment features designed to protect against electrical faults or mechanical faults which can prevent the component from assuming its required position, have priority over the manual and automatic ESF actuation demand signals from the SLS or DAS, in accordance with IEEE Std. 603-1991 Section 7.3. These protections are installed in the wiring circuits of the safety-related switchgear, motor control center or distribution panel, downstream of the SLS and DAS. An electrical or mechanical fault in one of these components is a single failure. Therefore the other trains which are not subject to that fault are available to achieve the safety functions.

Other process related equipment protection signals, such as low pressure or low level signals, provide equipment protection only through an interface to the SLS application software. Thermal overload signals for the safety-related motor operated valves, which also interface to the SLS application software, are normally active, but are automatically bypassed within the SLS application software, when there is an ESF actuation demand signal, in accordance with RG 1.106 (Reference 7.3-13). Since these signals are not interfaced to any circuits downstream of the SLS, they are inherently bypassed by the DAS signals which interface with the PIF modules.

7.3.1.3 Engineered Safety Features

For the US-APWR, the ESF consists of the ECCS, containment isolation systems, CSS, EFWS, annulus emergency exhaust system, and MCR HVAC system. These systems are discussed in Chapters 6, 9, and 10.

ESF systems activate the required components to mitigate plant conditions relating to the occurrence of specific credible limiting fault(s). Examples of such limiting faults are; LOCA, large or small steam line break, LOOP, LOCA followed by LOOP, or LOOP followed by LOCA, or both occurring together, control rod ejection, SG tube rupture, and all credible accidents in which radioactive fission products could be released from the RCS.

7.3.1.4 Process Variables Monitored for ESF

A number of process variables, equipment status and plant parameters that are monitored to establish the degraded plant condition(s) and are used for generating ESF actuation signals to initiate various required ESF systems. Table 7.3-3 provides a list of process variables and signals. Table 7.3-4 provides range, accuracy, response time, and

- High-high SG water level: (high-high water level in any of the SGs A, B, C, or D) (see description above)
- The bypass signal from the MFW isolation bypass control switch (operating bypass) can be activated only when pressurizer pressure P-11 interlock is present (i.e., when the pressurizer pressure signal is lower than the P-11 setpoint). This operating bypass is automatically removed on deactivation of P-11 interlock (i.e., when pressurizer pressure signal is above the P-11 setpoint). This bypass function bypasses the MFW isolation signal for all MFW pumps, all MFW isolation valves, and all SG water filling control valves.

A resulting signal for MFW isolation actuates the following:

- Trip all MFW pumps
- Close all MFW isolation valves
- Close all SG water filling control valves
- Close all MFW bypass regulation valves
- Close all MFW regulation valves

The actuation signals to trip non-safety MFW pumps are electrically isolated in the SLS via power interface modules.

7.3.1.5.9 Emergency Feedwater Actuation

ESF actuation signal for EFW function is generated when any of the following initiating signals are present:

- Low SG water level: Low SG water level in any SGs A, B, C, or D, based on 2-out-of-4 signals.
- ECCS actuation signal.
- LOOP signal. Refer to Subsection 7.3.1.1.
- MFW pumps trip: EFW actuation on trip of all MFW pumps is an anticipatory function that is not credited in the safety analysis. Therefore, this is not a safety~~-related~~ function but is designed to be highly reliable. Isolation is provided within the PSMS for this function. Redundant trip signals for each MFW pump are interfaced from the PCMS to the PSMS via hardwired connections. Since these non-safety signals can only result in EFW actuation, there is no potential for adverse interaction with the safety function. Since actuation requires signals from all four MFW pumps, there is minimal potential for spurious actuation. MIC-04-07-00006
- Manual actuation

- The block cooldown turbine bypass valve actuation by low-low T_{avg} may be manually overridden at the train level. This manual override cannot be initiated until after automatic system level actuation. The manual override may be manually reset by the operator at any time, and is automatically reset when the low-low T_{avg} initiation signal returns to normal. This signal blocks the cooldown turbine bypass valves. In MUAP-07004 Appendix D (b), this override is referred to as an operating bypass.

7.3.1.7 Interlocks

The interlocks for initiating and automatically removing operating bypasses are discussed above. The interlocks for manual overrides are discussed above. The interlocks for resetting system level actuation and channel level actuation are discussed in Subsection 7.3.1.6 for each specific safety function. The interlocks for maintenance bypasses are discussed in Subsection 7.1.3.11.

7.3.1.8 Redundancy

There are four redundant ESF trains for all ESF systems, except as specifically identified in Subsection 7.3.1.5. In addition, within each train, ESFAS and SLS controllers are redundant. Therefore, a single controller failure or a single controller taken out of service for maintenance of a redundant pair, has no adverse effect on the safety function and will not result in a limiting condition of operation (LCO) of the Technical Specification. The reliability of the ESFAS/SLS, as ~~analyzed~~described in the PRA Technical Report Attachment 6A.13 (Reference 7.3-14), is based on having two controllers in service. MIC-04-07-00001

7.3.1.9 Diversity

All ESF systems are automatically initiated from signals that originate in the RPS. Manual actuation of ESF systems is carried out through a diverse signal path that bypasses the RPS.

The SLS receives signals from the DAS to actuate ESF plant components. These signals are interfaced from DAS via qualified isolation devices within the SLS. The SLS provides priority logic to combine the DAS and SLS signals and to ensure the safe state always has priority. The DAS/SLS interface is described in The D3 Topical Report (Reference 7.3-3) Sections 6.2.1.3 and 6.2.4, and shown in Figure 7.3-1.

7.3.1.10 Defense-In-Depth/Design Features

The ESFAS and SLS implement the ESF system echelon of defense-in-depth scheme, as described in Subsection 7.1.3.1.

7.3.1.11 Turbine Trip to Prevent Unnecessary Emergency Core Cooling System Actuation

The turbine is tripped on a reactor trip or high-high SG water level in any SG. Turbine trip on RT is an un-credited non-safety function in the safety analysis. However, turbine trip on RT is assumed in the safety analysis in order to prevent unnecessary ECCS actuation and to shift to the safe shutdown state by appropriate actions after AOO and PA

7.3.4 Combined License Information

No additional information is required to be provided by a COL Applicant in connection with this section.

COL 7.3(1) Deleted

7.3.5 References

7.3-1 Safety System Digital Platform -MELTAC-, MUAP-07005-P Rev.8 (Proprietary) and MUAP-07005-NP Rev.8 (Non-Proprietary), July 2011.

7.3-2 Safety I&C System Description and Design Process, MUAP-07004-P Rev.7 (Proprietary) and MUAP-07004-NP Rev.7 (Non-Proprietary), May 2011.

7.3-3 Defense-in-Depth and Diversity, MUAP-07006-P-A Rev.2 (Proprietary) and MUAP-07006-NP-A Rev.2 (Non-Proprietary), September 2009.

7.3-4 Standard Criteria for Independence of Class 1E Equipment and Circuits, IEEE Std 384-1992.

7.3-5 Physical Independence of Electric Systems, Regulatory Guide 1.75 Revision 3, February 2005.

7.3-6 Setpoints for Safety-Related Instrumentation, Regulatory Guide 1.105 Revision 3, December 1999.

7.3-7 IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations, IEEE Std 603-1991.

7.3-8 IEEE Standard Design for Digital Computers in Safety Systems of Nuclear Power Generating Stations, IEEE Std 7-4.3.2-2003.

7.3-9 Standard Criteria for Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems, IEEE Std 338-1987.

7.3-10 Periodic Testing of Protection System Actuation Functions, Regulatory Guide 1.22 Revision 0, February 1972.

7.3-11 Function Assignment Analysis for Safety Logic System, MUAP-09020-P Rev.2 (Proprietary) and MUAP-09020-NP Rev.2 (Non-Proprietary), May 2011.

7.3-12 US-APWR Instrument Setpoint Methodology, MUAP-09022-P Rev.3 (Proprietary) and MUAP-09022-NP Rev.3 (Non-Proprietary), July 2013.

7.3-13 Thermal Overload Protection for Electric Motors on Motor-Operated Valves,Regulatory Guide 1.106 Revision 1, March 1977. MIC-04-07-00001

7.3-14 US-APWR Probabilistic Risk Assessment, MUAP-07030 Rev.3 (Proprietary), June 2011.

MIC-04-07-00001

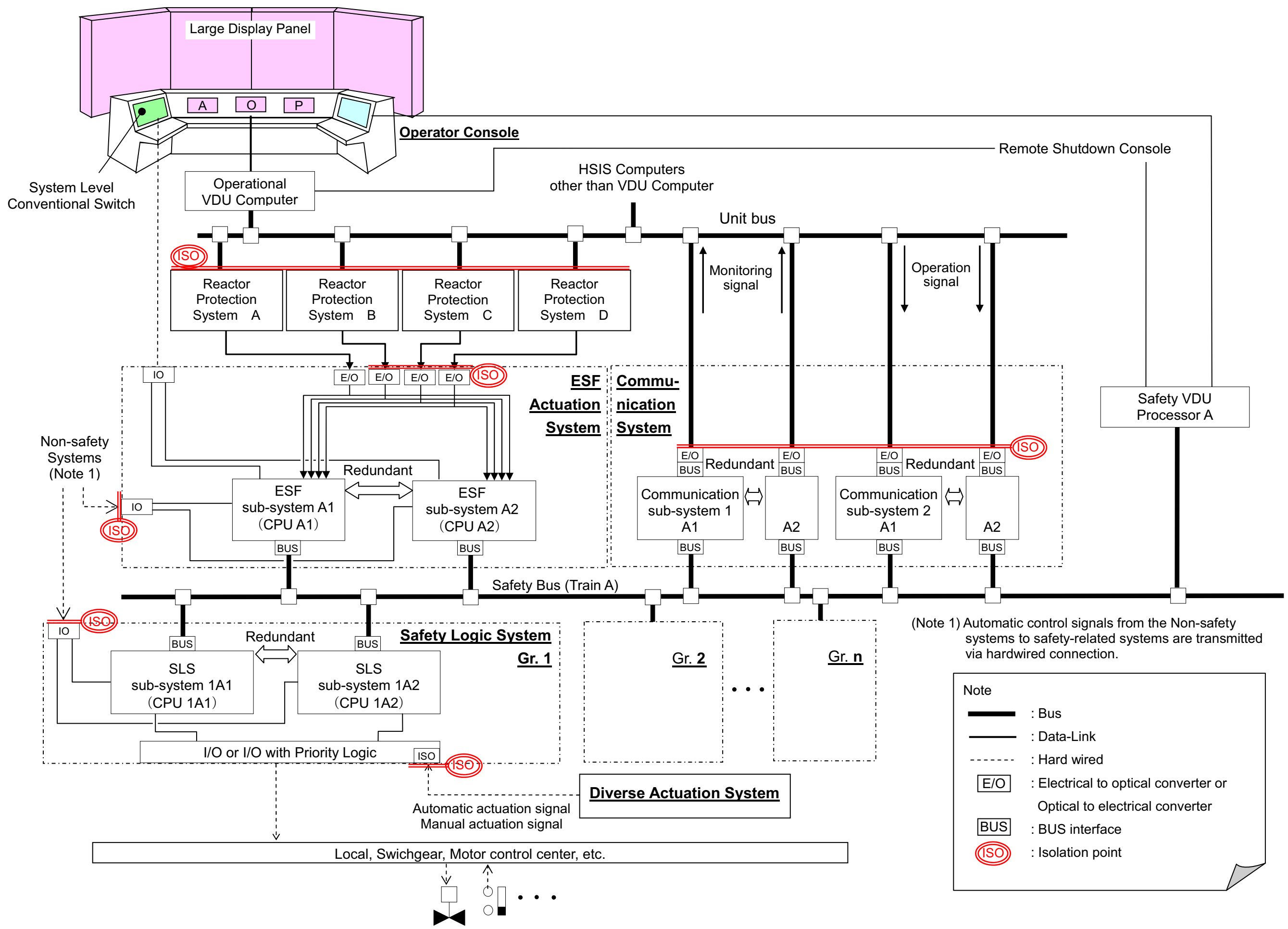


Figure 7.3-1 Configuration of Engineered Safety Features Actuation System and Safety Logic System

Table 7.4-1 Component Controls for Shutdown (Sheet 1 of 6)

Systems	Components	Normal Shutdown	Safe Shutdown	Train number for Safe Shutdown		Remarks
				Required Number	Actual Number	
RT System	RTB	No	Yes	3	4	2 breakers per train
RCS	RCP	Yes	No	-	-	Available with off-site power.
	Safety Depressurization Valve	No	Yes	2	2	Note1
	Safety Depressurization Valve Block Valve	No	Yes	2	2	Note1
	Pressurizer Heater Backup Group	No	Yes	3	4	
	Pressurizer Spray Valve	Yes	No	-	-	
	Reactor Vessel (RV) Vent Valve	No	Yes	2 per line	2	These valves could be used only if the venting becomes necessary.
CVCS	Charging Pump	Yes	No	-	-	Automatic start in LOOP.
	Charging Flow Control Valve	Yes	No	-	-	
	Letdown Line 1st (2nd) Stop Valve	Yes	No	-	-	
	Letdown Line inside C/V Isolation Valve	Yes	No	-	-	
	CHP Inlet Line VCT Side 1st, 2nd Isolation Valve	Yes	No	-	-	
	CHP Inlet Line BAT Side Isolation Valve	Yes	No	-	-	
	CHP Inlet Line RWSP Side Isolation Valve	No	No	-	-	These valves are automatically opened on Low Volume Control Tank Water Level.

Note1: The configuration of the Safety Depressurization Valves and Safety Depressurization Valve – Block Valves meets the single failure criteria (for both electrical and mechanical failures), to ensure the capability for depressurization when required and to prevent spurious depressurization. There are two depressurization lines, each with one Safety Depressurization Valve ~~(normally closed)~~ and one Safety Depressurization Valve – Block Valve ~~(normally open)~~, each assigned to different trains. Four trains are used, such that the four valves in the two depressurization lines do not share any common train assignments. Should a Safety Depressurization valve fail to open when required, depressurization can be achieved through the other line. ~~Should a Safety Depressurization valve spuriously open, the series block valve can be closed.~~ MIC-04-07-00010 MIC-04-07-00010

Table 7.4-2 Indication for Shutdown (Sheet 1 of 2)

Systems	Instruments	Number of Channels	Normal Shutdown	Safe Shutdown	Remarks	
RCS	Pressurizer Water Level	4	Yes	Yes		
	Pressurizer Pressure	4	Yes	Yes[*1]		DCD_07.05-18 S02
	Reactor Coolant Hot Leg Temperature (Wide Range)	1per Loop	Yes	Yes		
	Reactor Coolant Cold Leg Temperature (Wide Range)	1per Loop	Yes	Yes		
	Reactor Coolant Pressure	1per Loop	Yes	Yes		
CVCS	Boric Acid Tank Water Level	1 per tank	Yes	No		
	RCP Seal Water Return Line Flow	1 per RCP	Yes	No		
	RCP Seal Water Outlet Temperature	1 per RCP	Yes	No		
	Charging Flow	1	Yes	No		
SIS	Safety Injection Pump Discharge Flow	1 per Line	No	Yes	Used to maintain RCS inventory during Safe Shutdown.	
	Safety Injection Pump Minimum Flow	1 per Line	No	Yes		
	Safety Injection Pump Discharge Pressure	1 per Line	No	Yes[*1]		DCD_07.05-18 S02
	Safety Injection Pump Suction Pressure	1 per Line	No	Yes[*1]		DCD_07.05-18 S02
	Accumulator Pressure	1 per Tank	No	Yes	For ACC isolation during Safe Shutdown.	
RHRS	CS/RHR Hx Outlet Temperature	1 per Line	Yes	Yes[*1]		DCD_07.05-18 S02
	CS/RHR Pump Discharge Flow	1 per Line	Yes	Yes		
	CS/RHR Pump Minimum Flow	1 per Line	Yes	Yes		
	CS/RHR Pump Discharge Pressure	1 per Line	Yes	Yes[*1]		DCD_07.05-18 S02
	CS/RHR Pump Suction Pressure	1 per Line	Yes	Yes[*1]		DCD_07.05-18 S02
EFWS	EFW Pit Water Level	2 per Pit	No	Yes		
	EFW Flow	1 per Line	No	Yes		
	EFW Pump Discharge Pressure	1 per Line	No	Yes[*1]		DCD_07.05-18 S02
CFS	SG Water Level (Wide Range)	1 per SG	Yes	Yes		
MSS	Main Steam Line Pressure	4 per Line	Yes	Yes		

Table 7.4-2 Indication for Shutdown (Sheet 2 of 2)

Systems	Instruments	Number of Channels	Normal Shutdown	Safe Shutdown	Remarks	
CCWS	CCW Surge Tank Water Level	2 per Tank	Yes	Yes*1		DCD_07.05-18 S02
	CCW Header Pressure	1 per Line	Yes	Yes		
	CCW Header Flow	1 per Line	Yes	Yes*1		DCD_07.05-18 S02
	CCW Supply Temperature	1 per Line	Yes	Yes*1		DCD_07.05-18 S02
	CCW Pump Discharge Pressure	1 per Line	No	Yes*1		DCD_07.05-18 S02
ESWS	CCW Hx ESW Flow	1 per Line	Yes	Yes*1		DCD_07.05-18 S02
	ESW Header Pressure	1 per Line	Yes	Yes		
RWS	RWSP Water Level (Wide Range)	2	No	Yes		
NIS	Source Range Neutron Flux	2	~~No~~Yes	~~Yes~~No		DCD_07.05-18 S02
	Wide Range Neutron Flux	2	No	Yes		DCD_07.05-18 S02

Note: *1 Although these indications are provided for safe shutdown, they are considered backup indications in the context o Type D PAM variables. Therefore, these parameters are not included in DCD Tables 7.5-3 and 7.5-9 as Type D PAM variables. DCD_07.05-18 S02

The safety VDUs and the multidivisional safety VDUs for each train are isolated from each other and from non-safety systems.

IEEE Std 497-2002 (Reference 7.5-2) provides principles for the selection and categorization of PAM variables. Table 7.5-1 provides a summary of these selection criteria and source documents for each PAM variable type.

Table 7.5-2 provides the US-APWR design attributes applied to each variable type.

Table 7.5-3 provides a list of US-APWR PAM variables, their ranges, monitored functions or systems, quality and variable type. Tables 7.5-6 through 7.5-10 summarize the specific PAM variables by variable type and their associated required functions. The US-APWR PAM variables were selected using the selection criteria in IEEE Std 497-2002. The application of IEEE Std 497-2002, as endorsed in RG 1.97 (Reference 7.5-1) is typically based on site-specific AOPs and EOPs as supporting documents. Although MHI did not use site-specific AOPs and EOPs to select PAM variables, MHI has selected these variables in a manner that is consistent with the intent of IEEE Std 497-2002 and RG 1.97. Additional information regarding the bases for the selection of the PAM variables included in Table 7.5-3 is provided in Appendix H of the Safety I&C Technical Report (Reference 7.5-5). DCD_07.05-18 S02

The COL Applicant is to provide a description of site-specific PAM variables, which are Type D variables for monitoring the performance of the UHS and Type E variables for monitoring the meteorological parameters.

Instrumentation for monitoring severe accidents is discussed in Subsection 19.2.3.3.7. which summarizes the necessary equipment survivability for achieving and maintaining shutdown of the plant and maintaining containment integrity for severe accidents. A detailed description of the analysis on equipment survivability, including instruments required for severe accident monitoring, is provided in Chapter 15 of the PRA Technical Report(Reference 7.5-15). DCD_07.05-18 S02 MIC-04-07-00001

The Type A, B, and C variables/instrument functions are those determined by the application of the NRC-endorsed PAM instrumentation determination process, which is based on supporting the site-specific AOPs and EOPs, as stipulated in RG 1.97 Rev. 4 (Reference 7.5-1. The PAM variables in Table 7.5-3 are verified upon completion of the EOPs and AOPs. DCD_07.05-18 S02

7.5.1.1.1 Variable Classifications and Signal Processing Design

The following clarifications are provided for the design attributes identified in Tables 7.5-1 and 7.5-2:

1. Single Failure: The design ensures that at least one measurement channel is available after each single failures. Process measurement channels are interfaced to redundant trains of the RPS. Component status signals are interfaced to redundant trains of the SLS. PAM information is then interfaced to redundant safety-related HSI and non-safety HSI for display.

The Degrees of Subcooling indicates the loss of subcooling, occurrence of saturation and achievement of a subcooled condition following core recovery. The RVWL provides information to the operator on the decreasing liquid inventory in the reactor. The core exit temperature sensors monitor the increasing core exit temperatures associated with ICC and the decreasing core exit temperatures associated with recovery from ICC.

7.5.1.1.3.1 Degrees of Subcooling

The degrees of subcooling variable utilizes sensors for reactor coolant cold and hot leg temperatures, core exit temperature, and reactor coolant pressure.

The saturation temperature is calculated from the minimum pressure input. The temperature subcooled margin is the difference between saturation temperature and the sensor temperature input.

Two temperature subcooled margin presentations are available as follows:

- RCS saturation margin - the temperature saturation margin based on the difference between the saturation temperature and the maximum temperature from the resistance temperature detectors (RTDs) in the hot and cold legs.
- Upper head saturation margin - temperature saturation margin based on the difference between the saturation temperature and the core exit temperature.

7.5.1.1.3.2 Reactor Vessel Water Level

The RVWL probe assembly measures reactor coolant liquid inventory ~~above the fuel alignment plate~~ with the discrete heated junction thermocouple (HJTC) sensors located at different levels within a separator tube. The span of this measurement ranges is from the bottom of the hot leg to the top of the reactor vessel ~~ranging from the top of the fuel alignment plate to the RV head~~. The basic principle of operation is the detection of a temperature difference between adjacent heated and unheated thermocouples. MIC-04-07-00001

The HJTC sensor consists of a thermocouple near a heater (or heated junction) and another thermocouple positioned away from the heater (or unheated junction). In a fluid with relatively good heat transfer properties, the temperature difference between the adjacent thermocouples is small. In a fluid with relatively poor heat transfer properties, the temperature difference between the thermocouples is large.

Two RVWL probe assemblies provide two channels of HJTC instruments. Each HJTC probe assembly includes six HJTC sensors. The two probe assemblies are assigned to two electrically independent trains.

The heater power for the HJTC is supplied by a dedicated heater power supply for HJTC.

7.5.1.1.3.3 Core Exit Temperature

There are 39 core exit thermocouples. Thermocouples are threaded into individual guide tubes that penetrate the RV closure head through seal assemblies and terminate at the exit flow end of the fuel assemblies. All thermocouples are arranged in two safety trains

- Reactor coolant hot leg temperature (wide range)
- Reactor coolant cold leg temperature (wide range)
- Reactor coolant pressure

(3) Core Cooling

- Reactor coolant hot leg temperature (wide range)
- Reactor coolant cold leg temperature (wide range)
- Degrees of subcooling
- Core exit temperature
- Reactor coolant pressure
- RV water level DCD_07.05-18 S02

(4) Secondary Heat Sink

- SG water level (narrow range)
- SG water level (wide range)
- EFW flow
- MFW flow
- Main steam line pressure DCD_07.05-18 S02
- EFW pit water level

(5) RCS Integrity

- Reactor coolant pressure
- Reactor coolant hot leg temperature (wide range)
- Reactor coolant cold leg temperature (wide range)
- Degrees of subcooling
- Core exit temperature
- Containment pressure DCD_07.05-18 S02
- Refueling water storage pit water level (wide range)
- Refueling water storage pit water level (narrow range)

(6) Containment Integrity

- Containment pressure
- Containment temperature
- CS/RHR pump discharge flow
- Status of Containment isolation valves
- Containment high range area radiation DCD_07.05-18 S02

The SPDS is discussed in The Safety I&C Technical Report (Reference 7.5-5) Subsection 4.2.5.b.

The SPDS is provided by the PCMS on operational VDUs, alarm VDUs, and the LDP. The LDP provides a continuous display of the status of each critical safety function. The status displayed for each critical safety function corresponds to the critical safety function status algorithm defined in the emergency operating procedures (EOPs).

The computer that processes SPDS functions and all related HSI components are redundant, to ensure operation is not adversely affected by credible malfunctions. SPDS signals originate in plant instrumentation or within the controllers of the PCMS and PSMS. These signals are interfaced to the PCMS via the redundant unit bus, described in Section 7.9. The data interface to the PSMS is physically and functionally isolated so as not to affect the safety-related system in the event of SPDS component failure.

7.5.1.5 Credited Manual Operator Actions

The plant safety analysis credits manual operator actions where there are no automated actions. The manual operator actions credited in the safety analysis for accident mitigation are identified in Table 7.5-5.

All credited manual operator actions are included in the human factor engineering (HFE) program described in Chapter 18.

7.5.1.5.1 Quality of Alarms

The reliability of all PCMS alarms is ensured based on the following design aspects:

- Redundancy is provided for all alarm HSI components including audible and visual devices to ensure no adverse effects by credible malfunctions.
- Separation between redundant segments is provided so that a failure in one segment does not result in the failure of both redundant segments.
- Testability is provided from self-diagnosis of MELTAC and HSI computers.
- Conformance testing differs with respect to the QA level and documentation.

Table 7.5-3 PAM Variables (Sheet 1 of 4)

Variable	Range	Monitored Function or System	Quantity	Type
Reactor Coolant Hot Leg Temperature (Wide Range)*1	32 to 752°F	Core Cooling	1per Loop	A,B,D
Reactor Coolant Cold Leg Temperature (Wide Range)*1	32 to 752°F	Core Cooling	1 per Loop	A,B,D
Reactor Coolant Pressure	0 to 3000 psig	Core Cooling Maintaining RCS Integrity	4	A,B,C, D
Degrees of Subcooling	360°F Subcooling to 360°F Superheat	Core Cooling	2	A,B,D
Pressurizer Water Level*2	0 to 100% of Span	Primary Coolant System	4	A,B,D
SG Water Level (Wide Range)*3	0 to 100% of Span	Secondary System (SG)	1 per SG	B,D
SG Water Level (Narrow Range)*2	0 to 100% of Span	Secondary System (SG)	4 per SG	A,B,D
Main Steam Line Pressure*2	0 to 1400 psig	Secondary System (SG)	4 per SG	A,B,D
EFW Flow*3	0 to 250% Design Flow	Emergency Feedwater System	1 per Line	A,B,D
Wide Range Neutron Flux	1E-6 to 100% Full Power	Reactivity Control	2	A,B,D
Charging Flow	0 to 120% Design Flow	Maintaining RCS Integrity	2	A
Core Exit Temperature	200 to 2300°F	Core Cooling Fuel Cladding	2 Train (13 thermocouples for each train)	B,C
Containment Pressure*2	-7 to 80 psig	Maintaining RCS Integrity Maintaining Containment Integrity	4	B,C,D
RV Water Level	Bottom of Hot Leg to Top of Vessel	Core Cooling	2	B,D
Containment Isolation Valve Position (Excluding Check Valves)	Open/Closed	Maintaining Containment Integrity	1 per Valve	B,D
~~Reactor Coolant Soluble Boron Concentration~~	~~0 to 4000 ppm~~	~~Reactivity Control~~	~~(sampling)~~	~~B~~
CS/RHR Pump Discharge Flow*4	0 to 130% Design Flow	RHR or Decay Heat Removal System	1 per Line	D
CS/RHR Pump Minimum Flow*4	0 to 110% Design Flow	RHR or Decay Heat Removal System	1 per Line	D
Accumulator Pressure	0 to 1000 psig	Safety Injection System	1 per Tank	D
Accumulator Water Level	0 to 100% Span	Safety Injection System	1 per Tank	D

DCD_07.05-18 S02

DCD_07.05-18 S02

DCD_07.05-18 S02

Table 7.5-3 PAM Variables (Sheet 2 of 4)

Variable	Range	Monitored Function or System	Quantity	Type
Safety Injection Pump Discharge Flow	0 to 110% Design Flow	Safety Injection System	1 per Line	D
Safety Injection Pump Minimum Flow	0 to 110% Design Flow	Safety Injection System	1 per Line	D
Refueling Water Storage Pit Water Level (Wide Range)	0 to 100% Span	Safety Injection System	2	B,D
Refueling Water Storage Pit Water Level (Narrow Range)	0 to 100% Span	Safety Injection System	2	B,D
EFW Pit Water Level	0 to 100% Span	Emergency Feedwater System	2 per Pit	B,D
Containment Temperature	32 to 428°F	Containment Cooling Systems	1	D
CCW Header Pressure	0 to 220 psig	Cooling Water System	1 per Line	D
ESW Header Pressure	Plant Specific	Cooling Water System	1 per Line	D
Status of Standby Power and Other Energy Sources Important to Safety		Power Supplies		
• Class 1E ac Bus Voltage	0 to 9 kV ac		1 per Bus	D
• Class 1E dc Bus Voltage	0 to 150 V dc		1 per Bus	D
SFP Water Level (Narrow Range)	0 to 100% Span	Spent Fuel Pit Cooling and Purification System	2	D
SFP Temperature	32 to 212°F	Spent Fuel Pit Cooling and Purification System	2	D
SFP Pump Discharge Flow	0 to 110% Design Flow	Spent Fuel Pit Cooling and Purification System	2	D
Pressurizer Safety Valve Position	Open/Closed	Reactor Coolant System	1 per Valve	D
Safety Depressurization Valve Position	Open/Closed	Reactor Coolant System	1 per Valve	D
CS/RHR Pump Suction Relief Valve Position	Open/Closed	Residual Heat Removal System	1 per Valve	D
Containment Purge Isolation Valve Position	Open/Closed	Containment Purge System	1 per Valve	D
Main Feedwater Isolation Valve Position*6	Open/Closed	Main Feedwater System	1 per Valve	D
Main Steam Isolation Valve Position*7	Open/Closed	Main Steam Supply System	1 per Valve	D
Main Steam Depressurization Valve Position	Open/Closed	Main Steam Supply System	1 per Valve	D

DCD_07.05-18 S02

DCD_07.05-18 S02

DCD_07.05-18 S02

Table 7.5-3 PAM Variables (Sheet 3 of 4)

Variable	Range	Monitored Function or System	Quantity	Type
Main Steam Safety Valve Position	Open/Closed	Main Steam Supply System	1 per Valve	D
Main Steam Relief Valve Position	Open/Closed	Main Steam Supply System	1 per Valve	D
Emergency Feedwater Isolation Valve Position*8	Open/Closed	Emergency Feedwater System	1 per Valve	D
Main Control Room HVAC Damper Position	Open/Closed	Main Control Room HVAC System	1 per Damper	D
Radioactivity Concentration or Radiation Level in Circulating Primary Coolant	1/2 Tech Spec Limit to 100 Times Tech Spec Limit	Fuel Cladding	-(sampling)	C
Containment High Range Area Radiation*2	1 to 1E+7 R/hr	Containment Radiation	4	A,B,C, E
MCR Area Radiation	1E-5 to 1 mR/hr	Area Radiation	1	E
TSC Area Radiation	1E-4 to 1E+1 mR/hr	Area Radiation	1	E
Plant Vent Radiation Gas Radiation*5 (Including High Range)	5E-8 to 1E+5 μCi/cc	Airborne Radioactive Materials Released from Plant	1	E
Main Steam Line Radiation	1E-1 to 1E+3 μCi/cc	Airborne Radioactive Materials Released from Plant	1 per Line	E
GSS Exhaust Fan Discharge Line Radiation*5 (Including High Range)	5E-8 to 1E+5 μCi/c	Airborne Radioactive Materials Released from Plant	1	E
Condenser Vacuum Pump Exhaust Line Radiation*5 (Including High Range)	5E-8 to 1E+5 μCi/cc	Airborne Radioactive Materials Released from Plant	1	E
Plant Air Vent High Concentration Sampling System	1E-3 to 1E+2 μCi/cc	Airborne Radioactive Materials Released from Plant Particulates and Halogens	-(sampling)	E
Airborne Radio Halogens and Particulates (Portable Sampling with Onsite Analysis Capability)	1E-9 to 1E-3 μCi/cc	Environs Radiation and Radioactivity	-(sampling)	E
Plant and Environs Radiation (Portable Instrumentation)	1E-3 to 1E+4 R/hr, photons 1E-3 to 1E+4 rads/hr, beta Radiations and low-energy photons	Environs Radiation and Radioactivity	At least 1	E

DCD_07.05-18 S02

DCD_07.05-18 S02

Table 7.5-3 PAM Variables (Sheet 4 of 4)

Variable	Range	Monitored Function or System	Quantity	Type
Plant and Environs Radioactivity (portable instrumentation)	(Isotopic Analysis)	Environs Radiation and Radioactivity	At least 1	E
MCR Outside Air Intake Radiation	1E-7 to 1E-2 μCi/cc (Gas) 1E-11 to 1E-5 μCi/cc (Iodine) 1E-12 to 1E-7 μCi/cc (Particulate)	Airborne Radioactive Materials taken into MCR	1 for each	E
TSC Outside Air Intake Radiation	1E-7 to 1E-2 μCi/cc (Gas) 1E-11 to 1E-5 μCi/cc (Iodine) 1E-12 to 1E-7 μCi/cc (Particulate)	Airborne Radioactive Materials taken into TSC	1 for each	E
Meteorological Parameters (Wind Direction, Wind Speed, Estimation of Atmospheric Stability)	Site specific	Meteorology	1 for each	E

Note:

1. The number of quantity for Reactor Coolant Hot Leg Temperature (Wide Range) and Reactor Coolant Cold Leg Temperature (Wide Range) are one per loop because of having a diversity monitoring of each other.
2. An additional channel is assigned for a single failure concurrent with one channel unlimited instrument bypass for RT and ESF function, while the number of quantity required for Type A, B and C redundant PAM variables is two.
3. The number of quantity for SG Water Level (Wide Range) and EFW Flow is one per loop because of having a diversity monitoring function of each other.
4. CS Flow can be monitored to confirm the CS/RHR System Flow due to the sharing feature of RHR system and CS system flow line.
5. These monitors consist of two normal range monitors, one accident mid range monitor and one accident high range monitor. To function as a PAM variable, these monitors need one normal range, one accident mid range and one accident high range.
6. Includes all valves which are closed by Main Feedwater Isolation Signal. DCD_07.05-18 S02
7. Includes all valves which are closed by Main Steam Line Isolation Signal.
8. Includes all valves which are repositioned by Emergency Feedwater Actuation Signal or Emergency Feedwater Isolation Signal.

Table 7.5-5 List of Accidents and Credited Manual Actions

Accident	Alarm	Credited Manual Action
Inadvertent Decrease in Boron Concentration in RCS (Subsection 15.4.6)	- Control Rod Insertion Limit Alarm - One or more of the following: • Reactor Makeup Water Flow rate Deviation Alarm • Boric Acid Flow Rate Deviation Alarm • High Primary Makeup Water Flow Rate Alarm	Closure of Charging Flow Isolation Valve or Closure of Primary Makeup Water Control Valve or Stop of Primary Makeup Water Pump
Radiological Consequences of a SG Tube Failure (Subsection 15.6.3)	- Main Steam Line Radiation (N-16) Alarm - Low Pressurizer Water Level against Programmed Water Level Alarm	- Manual reactor trip - Isolation of Affected SG - Cooldown of Primary Coolant System by using Main Steam Depressurization Valve - Equilibrium of Pressure between Primary and Secondary Coolant System by using Safety Depressurization Valve - Stop of Injection from ECCS
Rod Ejection Accidents (Subsection 15.4.8)	Containment High Range Area Radiation Alarm	- Manual C/V Spray System Operation - Manual Annulus Emergency Exhaust System Operation
Failure of Small Lines Carrying Primary Coolant Outside C/V (Subsection 15.6.2)	- Low Volume Control Tank Water Level Alarm - High Charging Flow Alarm	RCS Sample Lines or CVCS Letdown Line Isolation

DCD_07.05-18 S02

Table 7.5-6 Function of Type A PAM Variables

Variable	Monitored Function or System	Required Function
Reactor Coolant Hot Leg Temperature (Wide Range)	Core Cooling	- SGTR Safety Analysis - RCS Depressurization based on EOPs in SGTR event
Reactor Coolant Cold Leg Temperature (Wide Range)	Core Cooling	
Reactor Coolant Pressure	- Core Cooling - Maintaining RCS Integrity	
Degrees of Subcooling	Core Cooling	
Pressurizer Water Level	Primary Coolant System	
Main Steam Line Pressure	Secondary System (SG)	
SG Water Level (Narrow Range)	Secondary System (SG)	- SGTR Safety Analysis - Manual action based on EOPs such as Safety injection termination in SGTR event
EFW Flow	Emergency Feedwater System	
Wide Range Neutron Flux	Reactivity Control	- Boron Dilution Safety Analysis - Manual action based on EOPs in boron dilution event
Containment High Range Area Radiation	Maintaining Containment Integrity	- Rod Ejection Safety Analysis - Manual action based on EOPs in rod ejection event
Charging Flow	Maintaining RCS Integrity	- Failure of Small Lines Carrying Primary Coolant Outside C/V Safety Analysis - Isolation of RCS sample line or CVCS letdown line

DCD_07.05-18 S02

Table 7.5-7 Function of Type B PAM Variables

Variable	Monitored Function or System	Required Function
Reactor Coolant Hot Leg Temperature (Wide Range)	Core Cooling	Assess process of accomplishing manual RCS cooling
Reactor Coolant Cold Leg Temperature (Wide Range)	Core Cooling	
Degrees of Subcooling	Core Cooling	
Pressurizer Water Level	Primary Coolant System	
Main Steam Line Pressure	Secondary System (SG)	
Reactor Coolant Pressure	- Core Cooling - Maintaining RCS Integrity	Assess process of manual RCS depressurization
SG Water Level (Wide Range)	Secondary System (SG)	Assess maintaining SG Heat Removal Function
SG Water Level (Narrow Range)	Secondary System (SG)	
EFW Flow	Emergency Feedwater System	
Wide Range Neutron Flux	Reactivity Control	- Assess maintaining sub-critical state - Monitoring neutron flux decreasing after reactor trip
Core Exit Temperature	- Core Cooling - Fuel Cladding	Assess maintaining Core Cooling
RV Water Level	Core Cooling	
Containment Pressure	- Maintaining RCS Integrity - Maintaining Containment Integrity	- Assess maintaining CV Integrity - Monitoring CV pressure response
Containment Isolation Valve Position (Excluding Check Valves)	Maintaining Containment Integrity	Assess the process of accomplishing or maintaining CV Isolation
~~Reactor Coolant Soluble Boron Concentration~~	~~Reactivity Control~~	~~Indicate boron concentration (sampling)~~ DCD_07.05-18 S02
Refueling Water Storage Pit Water Level (Wide Range)	Safety Injection System	Verifying safety injection source
Refueling Water Storage Pit Water Level (Narrow Range)	Safety Injection System	
EFW Pit Water Level	Emergency Feedwater System	Verifying EFW source
Containment High Range Area Radiation	Maintaining Containment Integrity	Assess the process of accomplishing or maintaining CV Isolation DCD_07.05-18 S02

Table 7.5-8 Function of Type C PAM Variables

Variable	Monitored Function or System	Required Function
Core Exit Temperature	- Core Cooling - Fuel Cladding	- Indicate potential for a breach of fission product barriers - Indicate an actual breach of fission product barriers
Reactor Coolant Pressure	RSC Integrity	
Containment Pressure	- RCS Integrity - Containment Integrity	
Radioactivity Concentration or Radiation Level in Circulating Primary Coolant	Fuel Cladding	Indicate an actual breach of fission product barriers
Containment High Range Area Radiation	Containment Radiation	

DCD_07.05-18 S02

DCD_07.05-18 S02

Table 7.5-9 Function of Type D PAM Variables (Sheet 1 of 2)

Variable	Monitored Function or System	Required Function
Reactor Coolant Hot Leg Temperature (Wide Range)	Core Cooling	Monitoring Long Term Core Cooling
Reactor Coolant Cold Leg Temperature (Wide Range)	Core Cooling	
Reactor Coolant Pressure	- Core Cooling - Maintaining RCS Integrity	
Degrees of Subcooling	Core Cooling	
Pressurizer Water Level	Primary Coolant System	
Main Steam Line Pressure	Secondary System (SG)	
RV Water Level	Core Cooling	
SG Water Level (Wide Range)	Secondary System (SG)	Monitoring Long Term SG Heat Removal
SG Water Level (Narrow Range)	Secondary System (SG)	
EFW Flow	Emergency Feedwater System	
EFW Pit Water Level	Emergency Feedwater System	
Wide Range Neutron Flux	Reactivity Control	Monitoring Long Term Reactor Shutdown State
Containment Pressure	- Maintaining RCS Integrity - Maintaining Containment Integrity	Monitoring CV Integrity
Containment Temperature	Containment Cooling Systems	
Containment Isolation Valve Position (Excluding Check Valves)	Maintaining Containment Integrity	Monitoring CV Isolation
CS/RHR Pump Discharge Flow	RHR or Decay Heat Removal System	Indicate performance of CV spray system
CS/RHR Pump Minimum Flow	RHR or Decay Heat Removal System	
Accumulator Pressure	Safety Injection System	Indicate performance of Accumulator
Accumulator Water Level	Safety Injection System	
Safety Injection Pump Discharge Flow	Safety Injection System	Indicate performance of Safety Injection system
Safety Injection Pump Minimum Flow	Safety Injection System	
Refueling Water Storage Pit Water Level (Wide Range)	Safety Injection System	
Refueling Water Storage Pit Water Level (Narrow Range)	Safety Injection System	
CCW Header Pressure	Cooling Water System	Indicate performance of CCW system
ESW Header Pressure	Cooling Water System	Indicate performance of ESW system
Status of Standby Power and Other Energy Sources Important to Safety Class 1E ac Bus Voltage Class 1E dc Bus Voltage	Power Supplies	Verifying Energy Sources
SFP Water Level (Narrow Range)	Spent Fuel Pit Cooling and Purification System	Indicate performance of Spent Fuel Pit Cooling and Purification System

DCD_07.05-18 S02

Table 7.5-9 Function of Type D PAM Variables (Sheet 2 of 2)

Variable	Monitored Function or System	Required Function
SFP Temperature	Spent Fuel Pit Cooling and Purification System	Indicate performance of Spent Fuel Pit Cooling and Purification System
SFP Pump Discharge Flow	Spent Fuel Pit Cooling and Purification System	Indicate performance of Spent Fuel Pit Cooling and Purification System
Pressurizer Safety Valve Position	Reactor Coolant System	Verifying Pressurizer Safety Valve Status
Safety Depressurization Valve Position	Reactor Coolant System	Verifying Safety Depressurization Valve Status
CS/RHR Pump Suction Relief Valve Position	Residual Heat Removal System	Verifying CS/RHR Pump Suction Relief Valve Status
Containment Purge Isolation Valve Position	Containment Purge System	Verifying Containment Purge Isolation Valve Status
Main Feedwater Isolation Valve Position*1	Main Feedwater System	Verify Main Feedwater Isolation Valve Status
Main Steam Isolation Valve Position*2	Main Steam Supply System	Verify Main Steam Isolation Valve Status
Main Steam Depressurization Valve Position	Main Steam Supply System	Verify Main Steam Depressurization Valve Status
Main Steam Safety Valve Position	Main Steam Supply System	Verify Main Steam Safety Valve Status
Main Steam Relief Valve Position	Main Steam Supply System	Verify Main Steam Relief Valve Status
Emergency Feedwater Isolation Valve Position*3	Emergency Feedwater System	Verify Emergency Feedwater Isolation Valve Status
Main Control Room HVAC Damper Position	Main Control Room HVAC System	Verify Main Control Room HVAC Damper Status

DCD_07.05-18 S02

Notes:

1. Includes all valves which are closed by Main Feedwater Isolation Signal.
2. Includes all valves which are closed by Main Steam Line Isolation Signal.
3. Includes all valves which are repositioned by Emergency Feedwater Actuation Signal or Emergency Feedwater Isolation Signal.

Table 7.5-10 Function of Type E PAM Variables

Variable	Monitored Function or System	Required Function
MCR Area Radiation	Area Radiation	Monitor radiation and radioactivity levels in the control room and selected plant areas where access may be required for plant recovery
TSC Area Radiation	Area Radiation	
MCR Outside Air Intake Radiation	Airborne Radioactive Materials taken into MCR	
TSC Outside Air Intake Radiation	Airborne Radioactive Materials taken into TSC	
Plant Vent Radiation Gas Radiation (Including High Range)	Airborne Radioactive Materials Released from Plant	Monitor the magnitude of releases of radioactive materials through identified pathways
Containment High Range Area Radiation	Airborne Radioactive Materials Released from Plant	
Main Steam Line Radiation	Airborne Radioactive Materials Released from Plant	
GSS Exhaust Fan Discharge Line Radiation (Including High Range)	Airborne Radioactive Materials Released from Plant	
Condenser Vacuum Pump Exhaust Line Radiation (Including High Range)	Airborne Radioactive Materials Released from Plant	
Plant Air Vent High Concentration Sampling System	Airborne Radioactive Materials Released from Plant Particulates and Halogens	
Airborne Radio Halogens and Particulates (Portable Sampling with Onsite Analysis Capability)	Environs Radiation and Radioactivity	Monitor radiation levels and radioactivity in the plant environs
Plant and Environs Radiation (Portable Instrumentation)	Environs Radiation and Radioactivity	
Plant and Environs Radioactivity (Portable Instrumentation)	Environs Radiation and Radioactivity	
Meteorological Parameters (Wind Direction, Wind Speed, Estimation of Atmospheric Stability)	Meteorology	Monitor the environmental conditions used to determine the impact of releases of radioactive materials through identified pathways

DCD_07.05-18 S02

MIC-04-07-00001

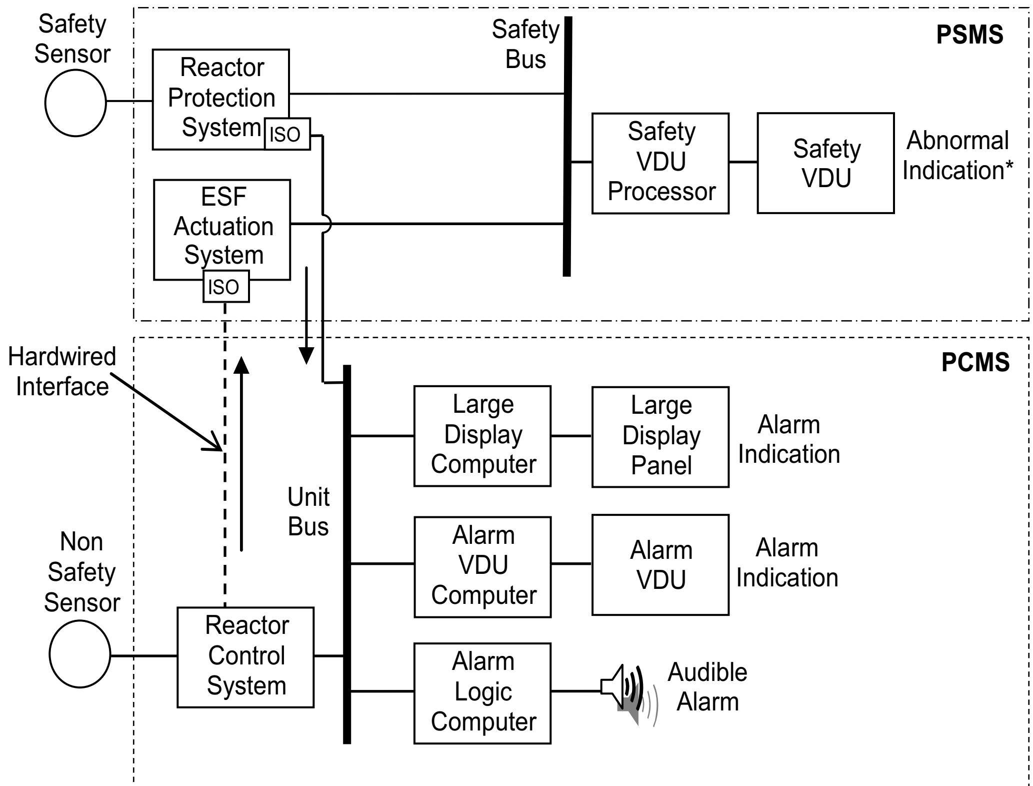


Figure 7.5-4 Alarm System Configuration

heat removal system, containment spray system, and essential service water system, are mechanically separated in each train.

- There are no automatic interlocks required to preclude inadvertent inter-ties between redundant trains of the CCWS ~~since~~because a single failure of one CCW pump would not cause pump run out in the other CCW pump ~~during an accident condition~~, even if the isolation valves between safety trains remain open and there is sufficient time margin for manual isolation. The header tie line isolation valve is manually closed within 24 hours after an ECCS signal to establish separation of the two trains within a subsystem as described in Subsection 9.2.2.2. MIC-04-07-00001

- Redundant I&C trains are protected from inadvertent inter-ties, such as those cause by electrical faults, by qualified isolation devices described in Subsection 7.1.3.5.

- Inadvertent inter-ties between safety-related systems and the DAS are discussed in Section 7.8.

- Redundant mechanical trains (i.e., redundant CCW trains) are protected as discussed in Subsection 7.6.1.5.

7.6.4 Combined License Information

No additional information is required to be provided by a COL Applicant in connection with this section.

7.6.5 References

7.6-1 HSI System Description and HFE Process, MUAP-07007-P Rev.5 (Proprietary) and MUAP-07007-NP Rev.5 (Non-Proprietary), November 2011.

7.6-2 IEEE Standard Criteria for Safety Systems for Nuclear Power Generating Stations, IEEE Std 603-1991.

7.6-3 IEEE Standard Design for Digital Computers in Safety Systems of Nuclear Power Generating Stations, IEEE Std 7-4.3.2-2003.

7.6-4 Safety I&C System Description and Design Process, MUAP-07004-P Rev.7 (Proprietary) and MUAP-07004-NP Rev.7 (Non-Proprietary), May 2011.

7.6-5 Combined License Applications for Nuclear Power Plants (LWR Edition), Regulatory Guide 1.206 Revision 0, June 2007.

7.7 Control Systems Not Required for Safety

The function of the US-APWR control systems not required for safety is to establish and maintain the plant operating conditions within prescribed limits. These control systems improve plant safety by minimizing the frequency of protection responses required and relief the operator from routine tasks.

The control functions not required for safety are implemented by the PCMS. The PCMS regulates conditions in the plant automatically in response to changing plant conditions and changes in plant load demand. These operating conditions include the following:

- Step load changes of plus or minus 10% while operating in the range of 15 to 100% of full power.
- Ramp load changes of plus or minus 5% per minute while operating in the range of 15 to 100% of full power (subject to core power distribution limits)
- Full load rejection from 100% power

These capabilities are accomplished without a reactor trip. Full load rejection is an event in which the main generator is cut off from the transmission system by a tripping of the main transformer breaker or the switchgear breaker without causing a turbine trip. In a load rejection scenario, the turbine governor valves are immediately fully closed, and the turbine bypass valves are opened fully, dumping the excess steam in the condenser. Reactor power is decreased by the automatic insertion of the control rods.

The AOOs defined in the plant safety analysis that must be considered in the control function design are listed in Table 7.7-1. To ensure the PCMS failures do not cause the concurrent AOOs that have not been considered in the plant safety analysis, control functions are distributed to separate the PCMS controller groups as shown in Table 7.7-2. The following sections describe the control functions and the features of those functions that ensure credible control system failures are bounded by the plant safety analysis.

The process control parameters and the control method are summarized in Table 7.7-4.

The listed control functions in the Table 7.7-2 are major control functions. Detailed control function distribution is described in Table J.1-1 of the Safety I&C Technical Report (Reference 7.7-1) DCD-07.07-33

7.7.1 Description

The following sections describe US-APWR control functions not required for safety that can affect the performance of critical safety functions.

7.7.1.1 Reactor Control System

The reactor control system section in the PCMS provides the following automatic functions to respond to the load changes described above.

7.7.1.1.11.1 Plant Startup and Shutdown

During plant startup and shutdown, the difference between measured steam header pressure and a pressure setpoint is used to generate a turbine bypass demand signal. This mode is used for low-power conditions (up through turbine synchronization). This mode is also used during plant cooldown for decay heat removal between hot standby and entry conditions for the RHR system.

The steam header pressure control mode is manually selected by the operator. The pressure setpoint is manually adjusted by the operator to obtain the desired reactor coolant temperature.

7.7.1.1.11.2 Normal Operation

In this mode, the turbine bypass control function is in a standby condition to modulate the turbine bypass valve to control T_{avg} to a reference temperature derived from turbine inlet pressure.

7.7.1.1.11.3 Load Rejection

The US-APWR is designed to sustain a full load rejection, without generating a RT, atmospheric steam relief, or actuating a pressurizer or main steam line safety relief valve(s).

Full load rejection means an event when the main generator is cut off from transmission system either by tripping the main transformer breaker or the switchgear breaker without causing a turbine trip or the main generator trip. In this scenario, the main turbine control valve is immediately fully closed, and four banks of turbine bypass valves are tripped opened, to fully dump excess steam to the condenser.

The main turbine control valves (MTCVs) and intercept valves (IVs) are controlled by the overspeed protection controller (OPC) upon a loss of load, as described in DCD Subsection 10.2.2.3.1.5. All of the MTCVs and IVs are fully closed by the OPC in response to a full load rejection event. After the turbine speed falls below the rated speed following the OPC action, the MTCVs and IVs are reopened, and the turbine resumes normal speed control by the turbine control system. MIC-04-07-00001

Reactor power is decreased by automatic control of control rods. The automatic turbine bypass control function, in conjunction with other control systems, is provided to accommodate this abnormal load rejection and to reduce the effects of the transient imposed on the RCS. By bypassing main steam to the condenser, an artificial load is maintained on the primary system. This artificial load makes up the difference between reactor power and the turbine load for load rejections.

The turbine bypass control function is sized to pass approximately 68 percent of nominal steam flow at nominal steam pressure. This capacity, in conjunction with the response of the reactor control system, is sufficient to handle load rejections (i.e., a step load decrease of 100% of the rated load.)

The The US-APWR is adequately protected from PCMS failures, including operational VDU failures, and meets DCD Chapter 15 AOOs and PAs acceptance criteria as described in the Safety I&C Technical Report (Reference 7.7-1) Subsection 5.1.8 which describes the basis for the PCMS failures assumed in the safety analysis. This is demonstrated by analyses which show: DCD_07.07-33

1. Consequences of multiple spurious actuation signals from a single PCMS control group caused by multiple random hardware failures or a software design defect meet the DCD Chapter 15 AOO acceptance criteria.

2. Consequences of multiple spurious actuation signals of multiple non-safety components, caused by a software design defect in multiple PCMS control groups, meet the DCD Chapter 15 PA acceptance criteria.

3. Consequences of multiple spurious actuation signals of multiple safety-related and non-safety components, caused by a software design defect in one or more operational VDUs, meet the DCD Chapter 15 PA acceptance criteria.

7.7.2.4 Effects of Control System Failures Caused by Accidents

The PCMS controllers are in mild environment locations, which are not impacted by plant accidents. In addition, most PCMS inputs come from safety-related sensors, which are qualified for accident environments. Some PCMS inputs come from non-safety grade sensors which are not qualified for accident environments. For example, for the feedwater line break (FLB) accident, malfunctions of the PCMS main feedwater control system may occur as a consequence of non-safety grade sensors failures due to the FLB accident environment. The DCD Chapter 15 analysis conservatively assumes that the PCMS main feedwater control system fails in a manner that aggravates this event. To accommodate random PCMS failures and PCMS failures that may be caused by accident conditions, the Chapter 15 safety analysis assumes the worst case PCMS single failure, which would aggravate the accident condition and is not blocked by safety functions. Therefore, results of any PCMS failures caused by AOOs or PAs are bounded by the DCD Chapter 15 analysis. DCD_07.07-33 DCD_07.07-33

7.7.2.5 Environmental Control System

Environmental control systems that are credited in the safety analysis are controlled by the PSMS, not the PCMS. Environmental control systems controlled by the PCMS, such as non-essential area HVAC, heat tracing, and/or forced air-cooling or heating, are considered in the failure analyses described above, refer to Subsections 7.7.2.3 and 7.7.2.4.

7.7.2.6 Use of Digital Systems

The PCMS and PSMS utilize the same basic software. In addition, the PCMS application software is developed using a structured process similar to that applied to development of the PSMS application software.

Therefore, the potential for control system failures that could challenge safety systems or impact plant safety functions has been minimized.

7.8 Diverse Instrumentation and Control Systems

The DAS is the non-safety diverse instrumentation and control system for US-APWR. The DAS provides monitoring, control and actuation of safety and non-safety systems required to cope with abnormal plant conditions concurrent with a CCF that disables all functions of the PSMS and PCMS. The DAS includes an automatic actuation function, HSI functions located at the diverse HSI panel (DHP), and interfaces with the PSMS and PCMS. The design basis and detailed system description for the DAS are described in the D3 Topical Report (Reference 7.8-1). Table 7.8-7 shows the supplemental information to Topical Report MUAP-07006-P-A, which is necessary to be clarified. The D3 Coping Analysis Technical Report (Reference 7.8-2) demonstrates the ability to maintain all critical safety functions and achieve hot standby using the DAS. There are differences between the D3 Topical Report (Reference 7.8-1) and the DCD which are due to design changes of the DAS that are applicable to the US-APWR. The scope, applicability and design differences from the D3 Topical Report (Reference 7.8-1) are described in Table 7.8-10. MIC-04-07-00001

The DAS design consists of conventional equipment that is totally diverse and independent from the MELTAC platform of the PSMS and PCMS, so that a beyond design basis CCF in these digital systems will not impair the DAS functions. In addition, the DAS includes internal redundancy to prevent spurious actuation of automatic and manual functions due to a single component failure. The DAS is designed to prevent spurious actuations due to postulated earthquakes and postulated fires. The DAS interfaces with the safety-related process inputs and outputs of the SLS are isolated within these safety-related systems. In addition, hardwired safety-related logic within the SLS (not affected by a CCF) ensures that control commands originating in the DAS or SLS, which correspond to the desired safety function, always have priority. Therefore, there is no adverse interaction of the DAS with safety functions and no erroneous signals resulting from CCF in the SLS that can prevent the safety function. For a figure of the DAS system architecture, refer to Figure 4.2-6 of MUAP-07004. Components' safe states in the state-based priority logic are shown in Table 7.8-11. MIC-04-07-00001

Within the DAS, manual actuation is provided for systems to maintain all critical safety functions (Refer to Table 7.8-1). For conditions where there is insufficient time for manual operator action, the DAS provides automatic actuation of required plant safety functions needed for accident mitigation. Key parameter indications, diverse audible and visual alarms, and provisions for manual controls are located in a dedicated independent DHP located in the MCR. Conventional hardwired logic hardware and relays for automatic actuation are installed in four diverse automatic actuation cabinets (DAACs), each located in a separate Class 1E electrical room. Each DAAC is powered by a separate Class 1E UPS via qualified isolation device. During plant on-line operation, the system can be tested manually without causing component actuation that would disturb plant operations.

The DAS and PSMS share diverse Class 1E power sources within each separate train. Although these power sources are shared, the diversity between these power sources prevents the possibility of CCF. As shown in DCD Figure 7.1-4, the diverse Class 1E power sources are the UPS and the transformer. The UPS is powered diversely by the Class 1E GTG, the Class 1E Battery and the offsite power. Thus, the Class 1E power MIC-04-07-00001

system itself has sufficient diversity and availability to assure power to the PSMS and DAS. Therefore, a separate power from Class 1E power sources is not required for the DAS power. Also, the PSMS and the DAS can be powered from the alternate non-safety GTG. In addition, the DAS power supply circuits are isolated from the Class 1E power sources system by qualified isolation devices (i.e., circuit breakers). MIC-04-07-00001

7.8.1 System Description

The DAS consists of manual HSI functions, which include automatic actuation functions. These functions are located in the DHP and the DAAC, respectively. In addition, the DAS consists of interfacing connections with the PSMS and CRDM motor-generator sets. The DAS receives inputs from qualified analog isolation devices located in the RPS or directly from plant components. The DAS provides outputs which interface to the SLS power interface modules via qualified isolation devices located in the SLS or directly to plant components.

Once actuated, either manually or automatically, the DAS signals are latched at the system level. This ensures all DAS functions actuate to completion. The DAS latches can be reset from the defeat switch located on the OC.

The overall DAS architecture is described in Topical Report MUAP-07006 Section 4.0. For manual and automatic system level, actuations from the DAS refer to functional logic diagram Figure 7.2-2 sheet 14.

7.8.1.1 Diverse HSI Panel

The DHP, which is located in the MCR, consists of conventional hardwired switches, conventional indicators for key parameters of all critical safety functions, and audible and visual alarms. The DHP installed equipment is used for manual control and actuations credited in the defense-in-depth and diversity coping analysis. Actuation status of each safety-related system actuated from the DHP can be confirmed by monitoring the safety function process parameters displayed on the DHP. The DHP is powered by a Class 1E UPS and located in the MCR. Also, the DHP is qualified as Seismic Category II.

7.8.1.1.1 Manual Actuation Switches

System level manual actuation is provided on the DHP for all automated functions and for systems required to maintain critical safety functions, which may not be automatically actuated. The following manual actuations are provided from conventional switches on the DHP:

- Reactor trip/turbine trip/MFW isolation: one switch
- EFW actuation: one switch
- ECCS: one switch
- Containment isolation: one switch
- EFW isolation and flow control: four switches (one per SG)

- EFW isolation and flow control: four switches (one per SG)
- Control of main steam depressurization valve: four switches (one per SG)
- Control of safety depressurization valve: one switch
- Control of main steam line isolation valve: four switches (one per SG)

To prevent spurious actuation due to a failure of any of the above switches, a separate manual actuation permissive switch in the power breaker for DHP is provided. The permissive switch in the power breaker for DHP is located in the MCR, but physically separated from the DHP to minimize the effect of fire propagation. The ~~DAS~~ permissive switch in the power breaker for DHP is powered by a Class 1E UPS that is separate from the power to the DHP. Signals from the manual actuation switches in DHP and permissive switch in the power breaker for DHP are interfaced separately from the MCR to each DAAC; refer to MUAP-07004 Section 4.2.6. To prevent spurious DAS actuation due to the MCR fire, all DAS manual actuation signals are blocked when the MCR/RSR transfer is activated, refer to the Safety I&C Technical Report (Reference 7.8-3) Figure 4.2-1. MIC-04-07-00001

The manual actuation switches listed above are sufficient to take all manual actions credited in the D3 Coping Analysis Technical Report (Reference 7.8-2), which demonstrates the ability to maintain all critical safety functions and achieve hot standby. Hot standby can be maintained for an extended period-of-time by direct operation of local power distribution and switching devices that are not affected by the CCF in the PSMS.

7.8.1.1.2 Alarms

When the DAS system level actuation signals are generated for (1) reactor trip, turbine trip, and MFW isolation, or for (2) EFW actuation or for (3) ECCS actuation, alarm for these functions is also actuated on the DHP. The diverse audible alarm is activated to notify the operators. The first out alarm panel, on the DHP, indicates the specific input parameter that has caused the system level actuation of reactor Trip, turbine trip and MFW isolation.

Failure information about the DAS, such as power supply failure, or module de-energized or removal, is alarmed as a "DAS failure summary alarm" on the Alarm VDU in the MCR. The configuration of the DAS alarms is described in Topical Report MUAP-07006 Subsection 6.2.2.1. High main steam radiation (N16) and high-high steam generator water level are alarmed and indicated on DHP. DAS alarms for high main steam radiation (N-16) and high-high steam generator water level are blocked during non CCF conditions, as described in Subsection 3.5.3 of the D3 Coping Analysis Technical Report (Reference 7.8-2). The duration of the blocking logic delay considers actuation times associated with emergency load sequencing conditions. When the blocking time delay expires, the DAS remains blocked if the status of plant components indicates the PSMS has actuated correctly. These blocks, shown in Figure 7.8-2, Figure 7.8-3, Figure 7.8-4, Figure 7.8-5 and Figure 7.8-6 consider both complete CCF and partial CCF conditions. The blocking logic considers both complete CCF and partial CCF conditions. Section 3.5 of D3 Coping Analysis Technical Report (Reference 7.8-2) provides the analysis for these conditions.

functions are: (a) Pressurizer pressure (4 channels each for low and high-pressure signals), (b) SG water level (4 channels, one per each SG for low level signals).

The numbers of channels required for each automatic actuation function are based on the following considerations:

- No single failure spuriously actuates the DAS.
- Bypass of a single channel does not cause the DAS automatic function to be inoperable, prevent decisions regarding credited manual actions or prevent monitoring critical safety functions.

The defeat switch can be manually actuated during plant heatup and cooldown conditions to prevent actuation of the DAS when it is not needed. This is an administratively controlled operating bypass.

The DAS functional logic diagram for automated actuation is included on Figure 7.2-2 sheet 14.

The DAACs are located in separate Class 1E Electrical Rooms. To cope with seismic events, the DAACs are qualified as Seismic Category II.

7.8.1.2.1 Reactor Trip, Turbine Trip and Main Feedwater Isolation

Reactor trip, turbine trip and MFW isolation are automatically actuated on the following signals:

- Low pressurizer pressure: 2-out-of-4 voting logic of the four pressurizer pressure low signals.
- High pressurizer pressure: 2-out-of-4 voting logic of the four pressurizer pressure high signals.
- Low SG water level: 2-out-of-4 voting logic of the one SG water level low signals from each SG.

The four pressurizer pressure signals are interfaced from each of the four PSMS trains. This configuration allows the DAS to meet the target reliability of the PRA with one channel continuously bypassed or inoperable. Refer to PRA Technical Report Attachments 6A.12 and 6A.13 (Reference 7.8-10) for the DAS model. MIC-04-07-00001

To support the single failure criterion for all PSMS functions, there are four SG water level signals (one per each train A, B, C, and D) on each SG. However, for the DAS, which does not need to meet the single failure criterion, only one water level signal is required from each SG.

The reactor trip is actuated by tripping the non-safety CRDM motor-generator set. This actuation leads to de-energizing the power for the CRDM by a means that is diverse from the RTB to release the control rods for gravity insertion into the reactor core. Diversity from the PSMS is maintained from sensor-inputs to final actuators.

startup and shutdown. This operating bypass is reset only by operator action of the above switch. Actuation of the defeat switch is displayed in the MCR on the operational VDU.

Although failure of the defeat switch may result in spurious DAS actuation during startup or shutdown, durations for these plant modes are sufficiently small. Therefore, this failure mode is acceptable.

7.8.2.7 Quality

The DAS is a non-safety system designed with augmented quality, as defined by Generic Letter 85-06 (Reference 7.8-5). General requirement of quality assurance and equipment qualification is described in Subsection 7.1.3.20. The following are the additional attributes of the augmented quality program of the DAS:

- Designed specially for nuclear applications using a nuclear quality program that meets the US-APWR QAP descriptions and the guidance in GL 85-06.
- Uses components with a long history of successful operation.
- Uses components that are common in conventional non-digital safety systems.
- Follow a design process that includes independent review by people that were not involved in the original design.

7.8.2.8 Defense-In-Depth and Diversity

The defense-in-depth and diversity approach is based on the following principles:

- Minimize the potential for CCF
- Cope with CCF for AOOs

DAS is implemented to mitigate the adverse effects/impacts from digital I&C both hardware and software common cause failure (CCF). It is not to minimize the potential or extent of software CCF.

A detailed description of each principle is provided in Topical Report MUAP-07006 Section 5.0.

7.8.2.9 Fire Protection

~~Fire~~ The DAS defeat switch which bypasses the automatic actuation functions of the DAAC is located on Operator Console in the MCR. The DAS permissive switch in the power breaker for DHP which enables the manual actuation functions of the DHP is located in the MCR adjacent to the DHP, but physically separated from the DHP manual actuation switches to minimize the effect of fire propagation. These DAS defeat and permissive switches and related cables are physically and electrically isolated from other circuits in the MCR, including the DHP, by fire barriers in accordance with IEEE 384-1992 MIC-04-07-00001

(Reference 7.8-11) (i.e., in accordance with isolation between Class 1E and non-Class 1E circuits). MIC-04-07-00001

The DAS manual actuation function from the DHP in the MCR and automatic functions from the DAACs are disabled if the MCR/RSC Transfer switch is in the RSC position. Therefore, spurious manual actuation signals from the DHP can not be initiated as a result of a fire event in the MCR.

The DAS defeat switch on the Operator Console in the MCR can be manually actuated during plant heatup and cooldown conditions to prevent actuation of the DAS when it is not needed. The DAS defeat switch is in the enable position during normal plant operating conditions. DAS automatic functions are also disabled by the MCR/RSR transfer switch which allows achieving cold shutdown from the RSC without unnecessary DAS actuation.

For details, fire protection for the DAS is described in MUAP-07004 Subsection 6.5.8.

7.8.3 Analysis

7.8.3.1 Anticipated Transient without Scram

In accordance with 10 CFR 50.62 (Reference 7.8-6), the DAS is diverse from the RT system to initiate turbine trip and EFW actuation. Although not required by 10 CFR 50.62 for all reactors, MHI's defense-in-depth and diversity approach also includes a diverse RT function for ATWS mitigation.

A detailed discussion of conformance of to 10 CFR 50.62 is provided in Topical Report MUAP-07006 Appendix B.

7.8.3.2 Adequacy of Manual Controls and Displays

Technical Report MUAP-07014 defines the alarms, indicators and controls required on the DHP for the operator to take manual actions credited for mitigating each AOO and PA included in Chapter 15, place the nuclear plant in a hot standby condition, and monitor and control the following critical safety functions:

- Reactivity control
- Core cooling
- RCS inventory
- Containment integrity
- RCS integrity
- Secondary heat sink

Technical Report MUAP-07014 also confirms that there is sufficient time for all credited manual operator actions through a qualitative analysis that compares the time available MIC-04-07-00001

to the time required. The HSI on the DHP is designed, verified, and validated in accordance with the HFE program described in Chapter 18. All credited manual operator actions identified in the D3 Coping Analysis Technical Report (Reference 7.8-2) are analyzed in accordance with the Task Analysis Implementation Plan Technical Report (Reference 7.8-12) to quantitatively confirm adequate margin between time available and time required. In addition, the credited manual actions identified in the D3 Coping Analysis Technical Report (Reference 7.8-2) are verified and validated as described in the Human Factors Verification and Validation Implementation Plan Technical Report (Reference 7.8-13). MIC-04-07-00001

7.8.3.3 Conformance to BTP 7-19

Topical Report MUAP-07006 Appendix A provides a detailed description for the conformance of BTP 7-19 (Reference 7.8-7).

7.8.4 Combined License Information

No additional information is required to be provided by a COL Applicant in connection with this section.

7.8.5 References

7.8-1 Defense-in-Depth and Diversity, MUAP-07006-P-A Rev.2 (Proprietary) and MUAP-07006-NP-A Rev.2 (Non-Proprietary), September 2009.

7.8-2 Defense-in-Depth and Diversity Coping Analysis, MUAP-07014-P Rev.5 (Proprietary) and MUAP-07014-NP Rev.5 (Non-Proprietary), September 2011.

7.8-3 Safety I&C System Description and Design Process, MUAP-07004-P Rev.7 (Proprietary) and MUAP-07004-NP Rev.7 (Non-Proprietary), May 2011.

7.8-4 Safety System Digital Platform -MELTAC-, MUAP-07005-P Rev.8 (Proprietary) and MUAP-07005-NP Rev.8 (Non-Proprietary), July 2011.

7.8-5 Quality Assurance Guidance for ATWS Equipment That Is Not Safety-Related, Generic Letter 85-06.

7.8-6 Requirements for Reduction of Risk from Anticipated Transients Without Scram (ATWS) Events for Light-Water-Cooled Nuclear Power Plants, NRC Regulations Title 10, Code of Federal regulations, 10 CFR Part 50.62.

7.8-7 Guidance for Evaluation of Defense-in-Depth and Diversity in Digital Computer-Based Instrumentation and Control Systems, BTP 7-19 Revision 5, March 2007.

7.8-8 HSI System Description and HFE Process, MUAP-07007-P Rev.5 (Proprietary) and MUAP-07007-NP Rev.5 (Non-Proprietary), November 2011.

7.8-9 US-APWR Instrument Setpoint Methodology, MUAP-09022-P Rev.3 (Proprietary) and MUAP-09022-NP Rev.3 (Non-Proprietary), July 2013.

7.8-10 US-APWR Probabilistic Risk Assessment, MUAP-07030 Rev.3 (Proprietary), June 2011. MIC-04-07-00001

7.8-11 Criteria for Independence of Class 1E Equipment and Circuits, IEEE Std 384-1992.

7.8-12 Task Analysis Implementation Plan, MUAP-13009-P Rev.0 (Proprietary) and MUAP-13009-NP Rev.0 (Non-Proprietary), August 2013.

7.8-13 Human Factors Verification and Validation Implementation Plan, MUAP-10012-P Rev.3 (Proprietary) and MUAP-10012-NP Rev.3 (Non-Proprietary), August 2013.

Table 7.8-1 Critical Safety Functions and Related Systems

Critical Safety Function	Related System	Control
Reactivity Control	Reactor Trip Turbine Trip	Automatic & Manual
RCS Inventory	ECCS	Automatic & Manual
Core Cooling	ECCS	Automatic & Manual
Secondary Heat Sink	EFWS Isolation of Secondary System Secondary System Depressurization	Automatic & Manual
RCS Integrity	Primary System Depressurization	Manual
Containment Integrity	Containment Isolation CSS	Manual

Note:
The systems listed in this table are required to operate at different times for different events. Table 7.8-3 shows the expected action time measured from the prompting alarms for various events.
These selected systems and expected action times establish the basis for DAS automation. The defense-in-depth and diversity coping analysis confirms the acceptability of DAS automation and credited manual operator action.

Table 7.8-2 Variables Monitored by DAS

Critical Safety Function	Variables	Number of Channel
Reactivity Control	Wide Range Neutron Flux	1
RCS Integrity	Pressurizer Pressure	1
	Reactor Coolant Pressure	1
Core Cooling	Reactor Coolant Cold Leg Temperature	1 per Loop
RCS ~~Integrity~~Inventory	Pressurizer Water Level	1
Secondary Heat Sink	SG Water Level	1 per SG
	Main Steam Line Pressure	1 per SG
Containment Integrity	Containment Pressure	1

DCD_07.05-18 S02

Note:
The DHP provides at least a single indicator for each parameter. The indication of parameter can be selectable between two channels to accommodate a channel that may be failed or in bypass.

Table 7.8-7 Supplemental Information to MUAP-07006-P-A (Sheet 2 of 6)

No.	Items to be clarified	Corresponding Section of SER for MUAP-07006-A	Resolution	Reference Document and Section
4	The US-APWR design certification applicant shall identify the specific controls and indications for the DHP and address human factors aspects for the DAS and PSMS system-level manual actuation means.	3.2.1, 3.2.2, 3.2.3	The specific controls and indications for the DHP are identified in DCD Table 7.8-1 and Table 7.8-2, respectively. Since the PSMS system level actuation controls are located on the OC and the DAS system level actuation controls are located on the DHP, and the use of the DHP controls is prompted by unique DHP alarms, there is little potential for human performance error. The HFE V&V program element described in DCD Section 18.10 ensures that the system level manual actuation means provided in PSMS and DAS, are used appropriately and without human performance error.	DCD Table 7.8-1 and 7.8-2. DCD Section 18.10.
5	The US-APWR design certification applicant shall provide the final determination of the setpoints and the response time of the DAS.	3.2.2	The DAS setpoints and time delay settings are shown in DCD Table 7.8-6. These values are demonstrated to be acceptable in MUAP-07014, Defense-in-Depth and Diversity Coping Analysis	DCD Table 7.8-6 MUAP-07014
6	The US-APWR design certification applicant shall demonstrate that the acceptability of the QA process used for the DAS meets the guidelines of GL 85-06.	3.2.2, 4.0	The QA process used for the DAS meets the guidelines of GL 85-06 as described in DCD Subsection 7.8.2.7. ~~To comply with GL 85-06 the DAS QA program will comply with 10 CFR 50 Appendix B as described in MUAP-07006 Subsection 6.2.1.7.~~	DCD Subsection 7.8.2.7 ~~MUAP-07006 Subsection 6.2.1.7~~

MIC-04-07-00001

Table 7.8-7 Supplemental Information to MUAP-07006-P-A (Sheet 4 of 6)

No.	Items to be clarified	Corresponding Section of SER for MUAP-07006-A	Resolution	Reference Document and Section
9	The US-APWR design certification applicant shall address the partial failures of the PCMS/ PSMS and demonstrate an adequate D3 strategy to cope with such failure modes.	3.2.3	Single failures that result in partial failure of the PSMS do not impact the PSMS safety functions, as demonstrated in DCD Tables 7.2-8 and 7.3-7Appendix G of MUAP-07004. The evaluation of partial common-cause failures of the PCMS/PSMS and an adequate D3 strategy to cope with such failure modes are provided in MUAP-07014, Defense-in-Depth and Diversity Coping Analysis.	DCD Tables 7.2-8 and 7.3-7Appendix G of MUAP-07004 and MUAP-07014
10	The US-APWR design certification applicant shall provide an acceptable defense-in-depth and diversity strategy for a LBLOCA concurrent with a CCF of the PSMS.	3.3.2	An acceptable D3 strategy for a LBLOCA concurrent with a CCF of the PSMS is described in MUAP-07014, Defense-in-Depth and Diversity Coping Analysis.	MUAP-07014
11	**Future Licensing Submittals** **(The resolution of Future Licensing Submittals described in Section 10 of MUAP-07006-A are follows)**			
11-1	Changes in implementation detail, as needed	1.0, 2.0	Application specific designs are described in Section 7.8	DCD Section 7.8
11-2	Specific description of the PSMS and the DAS functions	2.0	SubsectionSections 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 and 7.39 describes specific description of the PSMS; the DAS functions are in Section 7.8	DCD Sections 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 and 7.89 for PSMS DCD Section 7.8 for DAS.
11-3	Specific I&C functions implemented within the DAS	3.1 GDC 13	DCD Figure 7.2-2 Sheet 14 describes specific DAS functions.	DCD Figure 7.2-2

MIC-04-07-00001

MIC-04-07-00001

Table 7.8-10 Applicability of MUAP-07006-P-A (Reference 7.8-1) (Sheet 1 of 3)

MIC-04-07-00001

Section of MUAP-07006	Applicability to US-APWR DCD Chapter 7	Reasons for Design Differences	Applicable Description in DCD Chapter 7 and Technical Report
1.0	Applicable	-	-
2.0	Applicable	-	-
3.0	Applicable with updated Codes and Standards	Applicability for the US-APWR with updated Codes and Standards is summarized.	DCD Chapter 7 Table7.1-2 Section 7.8
4.0	Applicable except Figure 4.0-1	The overall architecture of the I&C system is updated.	DCD Chapter 7 Figure 7.1-1
4.1	Applicable	-	-
5.0	Applicable	-	-
5.1	Applicable	-	-
5.2	Applicable	-	-
5.3	Applicable	-	-
5.4	Applicable	-	-
5.5	Applicable	-	-
5.6	Applicable	-	-
6.0	Applicable except Figure 6.0-1	The DAS architecture is revised to protect against potential CCF concurrent with risk-significant external events.	MUAP-07004 Figure 4.2-6
6.1	Applicable except Table 6.1-1 Table 6.1-2 Table 6.1-3 Table 6.1-4 and Figure 6.1-1	The functional design features are updated to accommodate US-APWR plant requirement.	DCD Chapter 7 Table 7.8-1 Table 7.8-3 Table 7.8-5 Table 7.8-2 and Figure 7.2-2 (Sheet 14 of 21)
6.2	Applicable	-	-
6.2.1.1	Applicable	-	-
6.2.1.2	Applicable	-	-
6.2.1.3	Applicable	-	-
6.2.1.4	Applicable	-	-
6.2.1.5	Applicable	-	-
6.2.1.6	Applicable	-	-
6.2.1.7	Applicable except 10CFR50 App.B applicability	The DAS is designed with augmented quality to meet QA requirement of GL 85-06.	DCD Chapter 7 Subsection 7.8.2.7
6.2.2	Applicable	-	-
6.2.2.1	Applicable	-	-

Table 7.8-10 Applicability of MUAP-07006-P-A (Reference 7.8-1) (Sheet 2 of 3)

MIC-04-07-00001

Section of MUAP-07006	Applicability to US-APWR DCD Chapter 7	Reasons for Design Differences	Applicable Description in DCD Chapter 7 and Technical Report
6.2.2.2	Applicable except Figure 6.2-3	The functional design features are updated to accommodate US-APWR plant requirement.	DCD Chapter 7 Figure 7.8-2
6.2.2.3	Applicable	-	-
6.2.2.4	Applicable	-	-
7.0	Applicable	-	-
7.1	Applicable	-	-
7.2	Applicable	-	-
7.2.1	Applicable	-	-
7.2.2	Applicable	-	-
7.2.3	Applicable	-	-
7.2.4	Applicable	-	-
7.2.5	Applicable	-	-
7.2.6	Applicable	-	-
7.3	Applicable	-	-
7.3.1	Applicable	-	-
7.3.2	Applicable	-	-
7.3.2	Applicable	-	-
7.4	Applicable	-	-
7.5	Applicable	-	-
7.6	Applicable	-	-
7.7	Applicable	-	-
7.8	Applicable	-	-
7.9	Applicable	-	-
7.10	Applicable	-	-
7.11	Applicable	-	-
7.12	Applicable	-	-
7.12.1	Applicable	-	-
7.12.2	Applicable	-	-
7.12.3	Applicable	-	-
7.13	Applicable	-	-
7.14	Applicable	-	-
8.0	Applicable	-	-
8.1	Applicable	-	-
8.2	Applicable	-	-

Table 7.8-10 Applicability of MUAP-07006-P-A (Reference 7.8-1) (Sheet 3 of 3)

MIC-04-07-00001

Section of MUAP-07006	Applicability to US-APWR DCD Chapter 7	Reasons for Design Differences	Applicable Description in DCD Chapter 7 and Technical Report
8.3	Not Applicable	The automatic ECCS actuation function is added to cope with a LBLOCA concurrent with a CCF of the PSMS.	DCD Chapter 7 Section 7.8.1.2.3.
8.3.1	Not Applicable		
9.0	Applicable	-	-
9.1	Applicable	-	-
9.2	Applicable	-	-
9.3	Not Applicable	The automatic ECCCS actuation function is added to cope with a LBLOCA concurrent with a CCF of the PSMS.	DCD Chapter 7 Section 7.8.1.2.3
9.4	Applicable	-	-
10.0	Applicable	-	-
11.0	Applicable	-	-
Appenix A	Applicable	-	-
Appenix B	Applicable	-	-
Appenix C	Applicable	-	-

MIC-04-07-00001

Table 7.8-11 Safe State in State-Based Priority Logic

Component	Required Position	Safe State in Priority Logic	Remarks
Reactor Trip	Trip	Trip	DAS signal has no interface to PSMS.
Turbine Trip Solenoid Valves	Open	Open	PSMS and DAS have only open signal.
EFW Pumps	Start	Start	
Safety Depressurization Valve	Open/ Closed	Open	Safe state is determined as the position opposite to the most frequent position of operation.*1
Main Steam Depressurization Valve	Open/ Closed	Open	Safe state is determined as the position opposite to the the most frequent position of operation.*1
SG Blowdown Isolation Valve	Closed	Close	
MFW Regulation Valve	Closed	Close	
EFW Control Valve	Open/ Closed	Close	Safe state is determined as the position opposite to the the most frequent position of operation.*1
CV Isolation Valves	Closed	Close	
Main Steam Line Isolation Valves	Closed	Close	

Note:

1. Though a spurious demand signal same as the normal position would be undetectable, the opposite demand signal can reposition the component as necessary. In case of spurious demand signal opposite to the normal position, spurious repositioning of the component can be detectable by the BISI alarm and be corrected.

Security-Related Information - Withheld Under 10 CFR 2.390

7.9.1.6 Station Bus

The station bus provides information to plant and corporate personnel and to the EOF and ERDS. The station bus receives information from the DCS via the unit management computer. ~~The unit management computer provides a firewalled interface, which allows only outbound communication.~~ The isolation device, which is located between the unit management computer and the station bus, provides a hardware-based unidirectional interface which allows only outbound communication. There are no other connections from external sources to the DCS. MIC-04-07-00001

7.9.1.7 External Network Interface

The only interface from the PCMS and PSMS to external networks is via the ~~firewall within the unit management computer. The unit management computer~~ hardware-based unidirectional interface provided by the isolation device. The hardware-based unidirectional interface provides an outbound only interface to the plant Station Bus to allow communication to EOF computers, the NRC (via ERDS), corporate information systems and plant personnel computers. MIC-04-07-00001

7.9.2 Design Basis Information

7.9.2.1 Quality of Components and Modules

The PSMS includes the safety bus, data links, I/O bus, and safety VDU communications. The Quality of PSMS components and modules is described in Subsection 7.1.3.13.

7.9.2.2 Software Quality

The safety-related portions of the DCS are part of the PSMS. The non-safety portions of the DCS are part of the PCMS. All portions of the DCS handles the communication protocol and self-diagnosis, and application software, which handles the actual data being transmitted. ~~Software Quality of basic software is described in MELTAC Platform Technical Report (Reference 7.9-1) Section 6.1.~~ DCD_07.01-45

MHI applies ~~its MELCO's safety system~~ fully digital platform for the safety-related I&C system, MELTAC to PSMS and PCMS systems of US-APWR.

7.9.2.3 Performance Requirements

DCS in digital I&C system of the US-APWR meets the performance of required functions. The performance of the digital I&C system including DCS conforms to the guideline of BTP 7-21(Reference 7.9-15). The Response Time Technical Report (Reference 7.9-16) provides the response time of safety-related I&C system. The report demonstrates that

the safety-related I&C system meets the response time requirement from safety analysis. The simplified block diagrams of the RT and ESF functions propagation paths and response time of each path in the safety-related I&C system are provided. The conformance of BTP 7-21 and how the safety-related I&C system meets the performance requirements are also addressed in the Response Time Technical Report.

7.9.2.3.1 System Deterministic Timing

All DCS communication protocols allow calculation of a deterministic data communication response time. The time calculation includes the number of nodes on the network, data traffic, network topology, node processing cycle time, and network throughput. The methods used for real-time performance calculations are described in the MELTAC Platform Technical Report (Reference 7.9-1) Section 4.4.

7.9.2.3.2 Real-Time Performance

Real-time performance is determined by performing response time analysis for all safety-related functions. For each safety function an analysis has been performed which demonstrates the actual system response time is less than the response time required by the plant safety analyses. Refer to MUAP-07004 Subsection 6.5.3 for the related details. Response times for the RTS and ESFAS functions are listed in Tables 7.2-3 and 7.3-4 respectively.

7.9.2.3.3 Time Delays within the DCS

Data propagation delays due to data communication in the DCS are incorporated into response time analysis. Response time calculations, which encompass the controller and all components connected to the DCS, include these data propagation delays. DCS response time calculations are validated through sample tests, during system integration testing, refer to the Safety I&C Technical Report (Reference 7.9-2) Subsection 6.5.3.

7.9.2.3.4 Data Rates and Bandwidth

The data rates and bandwidths for the sections of the DCS are listed in the MELTAC Platform Technical Report (Reference 7.9-1) as follows:

- Control network: Table 4.3-2.
- Data links: Subsection 4.3.3.
- Maintenance network: Subsection 4.1.4.2.
- I/O bus: Appendix A.3.
- Safety VDU communication: Appendix A.11 and A.12.

7.9.2.3.5 Interfaces with other DCS

Security-Related Information - Withheld Under 10 CFR 2.390 MIC-04-07-00001

Security-Related Information - Withheld Under 10 CFR 2.390

MIC-04-07-00001

7.9.2.6 ~~Cyber Security~~Deleted

DCD_07.09-23 S03

~~The use of computer systems for various functions at nuclear power plants including digital I&C systems increases the potential for threats from cyber intrusions.~~

7.9.2.7 Independence

The DCS ensures electrical independence between PSMS trains and between the PSMS and PCMS to meet the single failure criterion. Summary descriptions of the independence design are described below.

Each PSMS and PCMS controller/processor protects itself against DCS errors or failures that could disrupt its internal application functions, thereby ensuring communications independence. For more detailed discussion on the methods used to ensure independence between digital systems in different trains and between safety-related and non-safety systems refer to Subsections 7.1.3.4, 7.1.3.5 and 7.1.4 and MUAP-07004 Appendix A.5.6,Appendix B.5.6 and Appendix F.

(1) Physical Independence

The four trains of the PSMS are physically independent from each other and from the non-safety systems. Cabinets for each train of the PSMS are located in a separate plant equipment room fire area (one per train). These fire areas are separate from the fire areas where non-safety systems are located. All PSMS DCS cables, with the exception of its maintenance networks, are routed in accordance with IEEE Std 384-1992 (Reference 7.9-5) to ensure physical independence of each train. PSMS maintenance network cables, which are non-safety, are routed with other non-safety cables, including PCMS DCS cables.

(2) Electrical Independence

Each train of the PSMS is powered from the independent class 1E power source. The four trains of the PSMS are electrically independent from each other and from the PCMS. To ensure electrical independence, fiber optic cables or qualified isolation devices are used to interface all signals between the PSMS trains and between the PSMS and the

Tier 2

Chapter 8

Chapter 8 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_08.02-17 S01	8.2.1.2 8.2.4 8.2.5	8.2-4 8.2-11 8.2-12	Response to RAI No. 1017 amended S01 MHI Letter No. UAP-HF-13312 Date 12/18/2013	DESIGN description was added to address the NRC Bulletin 2012-01.	-
MIC-04-08-00006	8.4.2.2 8.4.4	8.4-10	MHI Letter No. UAP-HF-14012 Date 02/20/2014	Revised revision number/date of Quality Assurance Program (QAP) Description, PQD-HD-19005	-
MIC-04-08-00003	8.3.1.1.6	8.3-25	Typo	Added a space between “1E” and “I&C”.	0
MIC-04-07-00001	8.3.1.1.2.5	8.3-15	Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	Revised subsection 8.3.1.1.2.5.	0
MIC-04-08-00005	8.3.5	8.3-63	Technical Report (MUAP-09023-P/NP) update	MUAP-09023-P/NP revision was updated from Revision 0 to Revision 1.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-08-00004	8.3.5	8.3-64	Technical Report (MUAP-10023-P/NP) update	MUAP-10023-P/NP revision was updated from Revision 5 December, 2012 to Revision 7 December, 2013.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

The MCCs provide thermal overload protection to the motor operated valves in accordance with RG 1.106 (Reference 8.3.1-11). The thermal overload protection are normally active, but are automatically bypassed, when there is an ESF actuation demand signal." after "protection devices are continuously bypassed. Alarms are provided in the MCR. During normal control modes or manual testing, motor operated valves are protected by manual de-energizing based on thermal overload alarm. MIC-04-07-00001

8.3.1.1.2.6 Testing of AC Systems during Power Operation

All Class 1E circuit breakers and motor controllers are testable during reactor operation. During periodic testing of Class 1E system, subsystems of the engineered safety features actuation system, such as safety injection, containment spray, and containment isolation are actuated thereby causing appropriate circuit breaker or contactor operation. The 6.9kV and 480V switchgear circuit breakers and control circuits can also be tested independently while individual equipment is shutdown. These circuit breakers can be placed in test position and exercised without operation of the associated equipment. The use of jumpers or other temporary test arrangements which would bypass protective functions is not required to verify system capability to operate except during startup testing.

The testing of ac power systems is performed in accordance with IEEE Std 308, 338 and 603 (Reference 8.2-4) as endorsed by RG 1.32, 1.118 and 1.153 (Reference 8.3.1-19, 8.3.1-24 and 8.3.1-5). Bypassed and inoperable status indication is provided based on RG 1.47 (Reference 8.3.1-23) as described in Section 7.5.1.2. Surveillance testing of Class 1E ac power systems is described in detail in Chapter 16.

8.3.1.1.2.7 Sharing of Systems and Equipment between Units

The US-APWR is a single unit design, so there is no sharing of safety-related systems or components between units.

8.3.1.1.2.8 Class 1E Electrical Equipment Qualification

The electrical equipment identified as safety-related is qualified as Class 1E and is designated as seismic category I. The Class 1E equipment and components are capable of withstanding the environmental conditions to which they are exposed. The Class 1E equipment qualification meets the requirements of IEEE Std 323 (Reference 8.3.1-6), IEEE Std 344 (Reference 8.3.1-12) and applicable equipment standards.

8.3.1.1.3 Class 1E Standby Power Sources

GTG is used as Class 1E standby power sources for the US-APWR. Design of the Class 1E standby power sources for US-APWR is based on the use of qualified GTG for Class 1E applications based on the advantages shown below:

- The GTG is more reliable and has fewer components and auxiliary systems than diesel generators.

- The GTGs do not have cooling water requirements.

the switch is not in remote position, an alarm on the operator console in the MCR and Class 1E GTG control panel will alert the operator that the Class 1E GTG is disabled.

8.3.1.1.4 Control Rod Power Supply

Electric power to control rod drive mechanism (CRDM) is supplied by two full capacity motor-generator sets. Each motor-generator set is powered from separate non-Class 1E 480V buses N3 and N5.

Each generator is driven by a 132kW (≈177HP) induction motor. The ac power is distributed to the rod control power cabinets through two Class 1E series connected reactor trip breaker sets each of which is located in the separate fire area.

8.3.1.1.5 Class 1E 480V AC Inverter Supply to MOVs

The Class 1E ac motor operated valves MCCs requiring Class 1E uninterrupted 480V ac power supply are fed from the 60kVA, 480V ac, 3 phase, 60Hz inverter. There are six inverters: Two each on train A and train D and one on each Class 1E train B and C. The inverter is connected to the Class 1E 125V dc bus in each train, as shown in Figure 8.1-1. The A MOV MCC1, A MOV MCC2, B MOV MCC, C MOV MCC, D MOV MCC1 and D MOV MCC2 are normally fed from the corresponding train of the MOV inverter each of which is backed up by the pertinent Class 1E 125V dc bus as shown in Figure 8.1-1. The Class 1E ac MCC backups the associated train MOV MCC in case of loss of MOV inverter output.

In the event of a postulated LOCA and coincident LOOP, the battery charger input power to the MOV inverters may be lost for up to 100 seconds until the onsite Class 1E GTGs are ready to accept loads. Each MOV is started at the required time by automatic starting signal for equalization of dc current. The 125V dc batteries and the MOV inverters are sized for continuous operating load and coincident starting load of all MOVs actuated by an engineered safety features actuation signal. The MOVs that are required to operate by an engineered safety features actuation signal and their load currents are shown in Table 8.3.1-10.

8.3.1.1.6 Class 1E 120V AC I&C Power Supply

There are four independent Class 1E 120V ac I&C power supply trains A, B, C & D to supply four trains of the protection and reactor control systems, as shown in Figure 8.3.1-3.

Each train consists of a UPS unit and three panelboards. UPS units contain a main inverter circuit, a bypass transformer circuit, and a static transfer switch for switching of main output from the inverter to the bypass transformer. Input to the main inverter and the bypass transformers in each train is obtained from the ac and dc buses belonging to the same train. The main inverter output circuit for the UPS of each train connects to two panelboards of the same train. The bypass transformer circuit connects to a single panelboard of the same train. Also, the main inverter output circuit for each train can be manually connected to a panelboard of an alternate train (A and B, or C and D) during GTG online maintenance condition as shown in Figure 8.3.1-3. Nominal ratings of major Class 1E I&C equipment are shown in Table 8.3.1-11. MIC-04-08-00003

8.3.1-22 Enhancement of Onsite Emergency Diesel Generator Reliability, NUREG/CR-0660, February 1979.

8.3.1-23 Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems, Regulatory Guide 1.47 Revision 0, May 1973.

8.3.1-24 Periodic Testing of Electric Power and Protection Systems, Regulatory Guide 1.118 Revision 3, April 1995.

8.3.1-25 Supplemental Guidance for Bypass and Inoperable Status Indication for Engineered Safety Features Systems, BTP 8-5, March 2007.

8.3.1-26 Electric Penetration Assemblies in Containment Structures for Nuclear Power Plants, Regulatory Guide 1.63 Revision 3, February 1987.

8.3.1-27 U.S. Nuclear Regulatory Commission, Standard Review Plan for the Review of Safety Analysis Report for Nuclear Power Plants, NUREG-0800, March 2007.

8.3.1-28 IEEE Standard Application of the Single-Failure Criterion to Nuclear Power Generating Station Safety Systems, IEEE Std 379, 2000.

8.3.1-29 IEEE Standard Criteria for the Periodic Surveillance Testing of Nuclear Power Generating Station Safety Systems, IEEE Std 338, 1987.

8.3.1-30 IEEE Standard Power Cable Ampacity Table, IEEE Std 835, 1994.

8.3.1-31 Ampacities of Cables Installed in Cable Trays, ICEA P-54-440/NEMA WC-51, 2003.

8.3.1-32 National Electrical Code, NFPA 70, 2005.

8.3.1-33 IEEE Guide for Safety in AC Substation Grounding, IEEE Std 80, 2000.

8.3.1-34 IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System, IEEE Std 81, 1983.

8.3.1-35 IEEE Guide to Grounding During the Installation of Overhead Transmission Line Conductors, IEEE Std 524a, 1993

8.3.1-36 Reporting of Defects and Noncompliance, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 21.

8.3.1-37 Quality Assurance Program Requirements for Nuclear Facility Applications, ASME NQA-1, 1994.

8.3.1-38 Onsite AC Power System Calculation, MUAP-09023-P Rev.~~0~~1 (Proprietary) and MUAP-09023-NP Rev.~~0~~1 (Non-Proprietary). MIC-04-08-00005

8.3.1-39 IEEE Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems, IEEE Std 242, 2001.

8.3.1-40 IEEE Standard for Insulation Coordination—Definitions, Principles, and Rules, IEEE Std 1313.1, 1996.

8.3.1-41 IEEE Guide for the Application of Insulation Coordination, IEEE Std 1313.2, 1999.

8.3.1-42 IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems, IEEE Std 519, 1992.

8.3.1-43 Initial Type Test Result of Class 1E Gas Turbine Generator System, MUAP-10023-P (Proprietary) and MUAP-10023-NP (Non-Proprietary), Rev. ~~5~~7, December 201~~2~~3. MIC-04-08-00004

8.3.1-44 Gas turbines - Procurement - Part 3: Design requirements, ISO 3977-3, 2004.

8.3.2-1 IEEE Recommended Practice for the Design of dc Auxiliary Power Systems for Generating Stations, IEEE Std 946, 2004.

8.3.2-2 IEEE Recommended Practice for Sizing Lead-Acid Batteries for Stationary Applications, IEEE Std 485, 1997.

8.3.2-3 IEEE Recommended Practice for Installation Design and Installation of Vented Lead-Acid Batteries for Stationary Applications, IEEE Std 484, 2002.

8.3.2-4 IEEE Recommended Practice for Maintenance, Testing and Replacement of Vented Lead-Acid Batteries for Stationary Applications, IEEE Std 450, 2002

8.3.2-5 IEEE Standard for Qualification of Class 1E Lead Storage Batteries for Nuclear Power Generating Stations, IEEE Std 535, 2006.

8.3.2-6 Installation Design and Installation of Vented Lead-Acid Storage Batteries for Nuclear Power Plants, Regulatory Guide 1.128 Revision 2, February 2007.

8.3.2-7 IEEE Guide for Installation, Inspection, and Testing for Class 1E Power, Instrumentation, and Control Equipment at Nuclear Facilities, IEEE Std 336, 2005.

8.3.2-8 Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants, Regulatory Guide 1.100 Revision 2, June 1988.

8.3.2-9 Maintenance, Testing, and Replacement of Vented-Acid Storage Batteries for Nuclear Power Plants, Regulatory Guide 1.129 Revision 2, February 2007.

8.3.2-10 Fire Protection for Nuclear Power Plants, Regulatory Guide 1.189 Revision 1, March 2007.

8.3.2-11 Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 50, Appendix B.

Tier 2

Chapter 9

Chapter 9 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_12.03-50	9.1.3.2	9.1-16	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about leak detection instruments.	-
DCD_12.03-53	9.1.4.2.2.2	9.1-35	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about drain line from RWSAT.	-
DCD_12.03-50	9.2.6.2.4	9.2-56	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about liquid level switches.	-
DCD_12.03-50	9.3.3.2.2	9.3-18	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about leak detection instruments.	-
DCD_12.03-53	9.3.3.2.2	9.3-18	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added a sentence, "This design feature meets the guidance of RG 4.21 and the requirements of 10 CFR 20.1406 for prevention of contamination of the facility and the environment."	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_12.03-58	9.1.4.2.2.2	9.1-34	Response to RAI No. 1027 MHI Letter No. UAP-HF-13292 Date 12/06/2013	Added description of control method of boron concentration in the RWSAT.	-
DCD_12.03-56	9.1.4.2.2.2	9.1-34	Response to RAI No. 1027 MHI Letter No. UAP-HF-13292 Date 12/06/2013	Added description about prevention of freezing of the RWSAT and related piping.	-
DCD_12.03-58	Figure 9.1.4-4	9.1-72	Response to RAI No. 1027 MHI Letter No. UAP-HF-13292 Date 12/06/2013	Revised Figure 9.1.4-4 to add isolation valves.	-
DCD_12.03-64	9.1.4.2.2.2	9.1-34	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about High radiation water.	-
DCD_12.03-67	9.1.4.2.2.2	9.1-34 9.1-35	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about overflow line from RWSAT.	-
DCD_12.03-65	9.1.4.2.2.2	9.1-36	Response to RAI No. 1028 MHI Letter	Added description about method to transfer drainage	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			No. UAP-HF-13293 Date 12/06/2013	from the reactor vessel flange.	
DCD_12.03-66	9.1.4.2.2.2	9.1-36	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added "in parallel". Added description about prevention of overflow of the SFP.	-
DCD_12.03-64	9.1.4.2.2.2	9.2-37	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added a sentence, "The high radiation water used for refueling is not directly transferred to the RWSAT."	-
DCD_12.03-63	9.2.6.2.6	9.2-57	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about siphon breaker of the PMWT over flow line.	-
DCD_12.03-63	Figure 9.2.6-2	9.2-144	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Revised Figure 9.2.6-2 to add the PMWT over flow line.	-
DCD_19-592	9.1.4.2.1.13	9.1-28	Response to RAI No. 1033 MHI Letter No. UAP-HF-13177 Date 07/12/2013	Clarified the need for refueling cavity level instrumentation when cavity is flooded up.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_01.05-4	9.1.3.2 9.1.3.3.2	9.1-17 9.1-23	Response to Fukushima-related RAI No. 1043 MHI Letter No. UAP-HF-13204 Date 08/13/2013	A paragraph was added to describe an additional connection for SFP diverse makeup.	-
DCD_01.05-4	Figure 9.1.3-1	9.1-67	Response to Fukushima-related RAI No. 1043 MHI Letter No. UAP-HF-13204 Date 08/13/2013	The P&ID was revised to add an additional connection for SFP diverse makeup.	-
DCD_09.01.02-45	9.1.2.2.1 9.1.2.2.2 9.1.2.2.3 9.1.4.2.1.13	9.1-7 9.1-9 9.1-11 9.1-31	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Revised surface finish specifications to be consistent with the 125AA value.	-
DCD_09.01.02-55	9.1.4.2.1.13	9.1-31	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Add description regarding the adequacy of the setpoint of the SFS-LICA-010-S and SFS LICA 020-S.	-
DCD_09.01.02-58	9.1.4.2.1.13	9.1-31	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Add description regarding the configuration requirements for the SFS-LICA-010-S and SFS LICA 020-S.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_09.01.02-44	Figure 9.1.2-4	9.1-66	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Revised the figure to include the physical dimensions and elevations of the containment racks.	-
DCD_09.01.02-55	Figure 9.1.4-2	9.1-70	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Revised information about the refueling cavity water level and corrected typographical errors.	-
DCD_09.01.02-54	Figure 9.1.5-4	9.1-76	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Revised the figure to indicate the location of the containment racks.	-
DCD_19-595	9.1.4.2.1.13	9.1-31	Response to RAI No. 1061 MHI Letter No. UAP-HF-13305 Date 12/12/2013	Incorporated description regarding administrative control for drain lines from the refueling cavity to the RWSP and the fill lines.	-
MIC-04-09-00003	9.1.2.2.2	9.1-7	Editorial correction	Changed “personel” to “personnel”	0
MIC-04-09-00004	Figure 9.1.5-4	9.1-76 [9.1-77]	Editorial correction	Changed “Withheld Under 10 CFR 2.390(d)(1)” to “Withhold Under 10 CFR 2.390” for Non Public version.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
				Added horizontal lines on the top and bottom of the figure.	
MIC-04-09-00005	9.2.1.2.2.3 9.2.2.2.1.3	9.2-11 9.2-30	Correction of typographical errors.	“accomodate” is changed to “accommodate”.	0
MIC-04-09-00002	Table 9.2.2-3 (Sheet 4 of 4)	9.2-96	Editorial	The addition of the statement about Valves.	0
MIC-04-09-00007	9.4	9.4-1	Typo	Deleted extra period.	0
MIC-04-09-00001	9.5.2.2.5.1	9.5-25	Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	Revised subsection 9.5.2.2.5.1.	0
MIC-04-09-00006	Table 9A-1 (Sheet 16 of 17)	9A-317	Editorial Correction	Deleted the column.	0
MIC-04-09-00006	Table 9A-2 (sheet 277 of 306)	9A-595	Editorial Correction	Adjacent Fire Zones: Added “FA6-101-15” in Wall. Added “-” and deleted “FA6-101-10 and FA6-101-15” in Floor.	0
MIC-04-09-00006	Table 9A-2 (sheet 278 of 306)	9A-596	Editorial Correction	Adjacent Fire Zones: Changed from “Floor” to “Wall”.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-09-00006	Table 9A-2 (sheet 279 of 306)	9A-597	Editorial Correction	Adjacent Fire Zones: Changed from “Floor” to “Wall”.	0
MIC-04-09-00006	Table 9A-2 (sheet 280 of 306)	9A-598	Editorial Correction	Adjacent Fire Zones: Added “FA6-101-16” in Floor. Changed from “Floor” to “Wall”.	0
MIC-04-09-00006	Table 9A-2 (sheet 281 of 306)	9A-599	Editorial Correction	Adjacent Fire Zones: Added “FA6-101-13” and deleted “FA6-101-03”in Wall.	0
MIC-04-09-00006	Table 9A-2 (sheet 284 of 306)	9A-602	Editorial Correction	Adjacent Fire Zones: Added “See Table 9A-3”in Floor.	0
MIC-04-09-00006	Table 9A-2 (sheet 287 of 306)	9A-605	Editorial Correction	Adjacent Fire Zones: Deleted “FA6-101-07”in Wall and “See Table 9A-3”in Floor.	0
MIC-04-09-00006	Table 9A-2 (sheet 289 of 306)	9A-607	Editorial Correction	Adjacent Fire Zones: Added “FA6-101-06” in Wall.	0
MIC-04-09-00006	Table 9A-2 (sheet 293 of 306)	9A-611	Editorial Correction	Adjacent Fire Zones: Added “FA6-101-11” in Wall.	0
MIC-04-09-00006	Table 9A-3 (sheet 30 of 33)	9A-654	Editorial Correction	FA6-101-03, Wall: Deleted “FA6-101-07” and “FA6-101-10”. FA6-101-06, Wall: Added “FA6-101-16”.	0
MIC-04-09-	Table 9A-3 (sheet 31 of	9A-655	Editorial	FA6-101-07, Wall: Deleted “FA6-101-	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
00006	33)		Correction	03" and "FA6-101-14". FA6-101-08, Wall: Added "FA6-101-04" and "FA6-101-15". FA6-101-11, Wall: Added "FA6-101-20". FA6-101-14, Wall: Deleted "FA6-101-07" and "FA6-101-10". FA6-101-16, Wall: Added "FA6-101-06".	
MIC-04-09-00006	Table 9A-3 (sheet 32 of 33)	9A-656	Editorial Correction	FA6-101-20, Wall: Added "FA6-101-11".	0
MIC-04-09-00006	Figure 9A-1	9A-659	Editorial Correction	Revised Figure 9A-1 to reflect the layout drawing changes (ESW Pipe Chase wall thickness change is reflected).	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

The structure of the new fuel storage pit supports the weight of the new fuel rack at the floor level. The new fuel storage rack, as shown in Figure 9.1.2-1, consists of individual vertical cells interconnected to each other at several elevations. The rack module is not anchored to the pit floor. The new fuel storage pit is covered by solid lids and an access platform. For each cell, the lids are normally closed and prevent misloading of a new fuel assembly in the space between the cells. The access platform provides passage between racks for inspection of the new fuel. Both the lids and access platform are designed not to fall or collapse in the event of the SSE.

The new fuel storage pit is provided with a drain system, which is connected to the R/B sump to prevent the new fuel storage pit from being flooded by an unanticipated release of water. The design of the drain piping system includes a check valve to prevent backflow into the new fuel pit storage area through the drain system. The new fuel rack storage cells are each designed with an opening at the bottom of each of the four sides, which can drain such unanticipated release of water. These openings are sized the same as the openings at the bottom of the spent fuel storage rack cells.

Center-to-center spacing of the new fuel rack array is 16.9 inches as shown in Figure 9.1.2-1, which provides a minimum separation between adjacent fuel assemblies. This design is sufficient to maintain a subcritical array even in the event of the new fuel storage pit being flooded with unborated water, fire extinguishing aerosols or during any design basis event. Additionally the design of the rack is such that a fuel assembly cannot be inserted into a location other than a location designed to receive an assembly, and an assembly cannot be inserted into a full location. Surfaces that come into contact with the fuel assemblies are made of annealed austenitic stainless steel, and are smooth (~~250 μ~~125AA ~~in.~~) in accordance with the requirement of ANSI/ANS-57.2. DCD_09.01.02-45

9.1.2.2.2 Spent Fuel Storage

The SFP, including its integrally attached liner, is designed as seismic category I and is located within the seismic category I reactor building fuel handling area. The spent fuel pit and its liner are designed for loads and load combinations addressed in DCD Subsection 3.8.4.3 and Table 3.8.4-3. Applicable loads include but are not limited to dead, live, hydrostatic, hydrodynamic, seismic, normal operating, accident thermal, and spent fuel assembly drop loads. The spent fuel pit and its liner are designed to maintain their structural integrity and remain leak tight under all applicable design loads and load combinations. The walls of the SFP are an integral part of the seismic category I reactor building structure. The facility is protected from the effects of natural phenomena such as earthquakes (Section 3.7), wind, hurricanes, tornados (Section 3.3), floods (Section 3.4), and external missiles (Section 3.5). The facility is designed to maintain its structural integrity following a SSE and to perform its intended function following a postulated event such as a fire. Refer to Subsection 1.2.1.5.4.3 for further discussions of the reactor building fuel handling area.

The SFP is approximately 47 feet deep, made of reinforced concrete lined with stainless steel plate. The SFP normal water level is approximately 1 ft -2 in. below the operating floor with approximately 400,000 gallons of borated water. This water level allows a spent fuel assembly to be transferred with at least 133 inches of water shielding above the top of the fuel assembly for personnel protection. The SFP is lined with stainless steel. The liner surface will have a 2B or higher finish, selected to minimize accumulation of MIC-04-09-00003

MIC-04-09-00004

DCD_09.01.02-54

Security-Related Information - Withheld Under 10 CFR 2.390

MIC-04-09-00004

Figure 9.1.5-4 Traveling Route of Heavy Load inside Containment

The COL Applicant is to provide the design details of the strainer backwash line, vent line, and their discharge locations.

9.2.1.2.2.3 CCW HX

Four 50% capacity plate type HXs, one per train, are provided. A detailed description of the HXs is given in Subsection 9.2.2.

CCW heat exchanger clogging will be prevented by the ESWP discharge strainer. Further, a backflushing line is provided for each CCW HX to enable backflushing of the heat exchanger following a high differential pressure alarm that is caused by accumulation of debris materials inside the heat exchanger plate flow channels.

To prevent potential CCW heat exchanger fouling, periodic inspection, monitoring, maintenance, performance and functional testing (including the heat transfer capability of the CCW heat exchangers consistent with GL 89-13) will be provided as discussed in Subsections 9.2.1.3 and 9.2.1.4. Further, adequate fouling factor margins in accordance with the manufacturer's standards and the system water chemistry will be required in the design specifications. Periodic inspection, monitoring and maintenance will ensure that the actual fouling is within design fouling factor margins to accommodate heat transfer for a minimum of the UHS design of 30 days. MIC-04-09-00005

The design of CCW heat exchangers will incorporate specific features regarding industry operating experience as discussed in EPRI TR 1013470 to minimize leakage from plate-type heat exchangers and potential blockage of the heat exchanger flow passages (Ref. 9.1.7-27).

9.2.1.2.2.4 Essential Chiller Units

Four 50% capacity chiller units, one per train, are provided. A detailed description of the essential chiller units is given in Subsection 9.2.7.

9.2.1.2.2.5 Piping

Carbon steel piping designed, fabricated, installed and tested in accordance with ASME Section III, Class 3 requirements, is used for the safety-related portion of the ESWS. Piping is arranged to permit access for inspection. The essential service water pipe tunnel (ESWPT), including the ESW piping from this tunnel to the ESW pump intake and discharge structures and the UHS, and the ESW piping in the essential service water pipe chase (ESWPC) are site specific but the existence and function of which are required in the standard design. The COL Applicant is to locate the pipes entering and exiting the pipe tunnel based on the location of the UHSRS, as required. [[The piping located in trenches will be externally lined carbon steel and the lining material specification will vary according to the site soil chemistry. The rest of the ESWS piping will be carbon steel or internally lined carbon steel depending on ESWS water chemistry requirements. Cathodic protection will be provided for buried piping. Access manholes will be provided as required for periodic inspection.]] The piping will be inspected per ASME Section XI, article IWA 5244 requirements.

Water chemistry control of CCWS is performed by adding chemicals to the CCW surge tank to prevent long term corrosion that may degrade system performance. The CCW in the surge tank is covered with nitrogen gas to maintain water chemistry. The elevation of the surge tank and piping arrangement minimize the potential for nitrogen accumulation in places other than the surge tank. Strainers are provided in piping connecting makeup water sources to the surge tank; based on heat exchanger flow passage dimensions, the strainer mesh size is 3mm.

In order to provide redundancy for a passive failure (a loss of system integrity resulting in abnormal leakage), an internal partition plate is provided in the tank so that two separate surge tank volumes are maintained. Accessibility is provided for inspection of the partition plate.

The CCW surge tank normal free volume of 20% can accommodate 300 gpm potential inleakage from an RCP thermal barrier heat exchanger for thirty seconds. The most significant volume change due to system temperature change is associated with start/stop of the Boric Acid Evaporator; the effect of such a change is about 10% of surge tank compartment volume, based on a potential temperature variation of ±7°F. Relief valves provide overpressure protection and discharge to the R/B sump tank. Makeup water supply is performed by an operator by locally operating the manual valves. A vacuum breaker is installed on the surge tank to prevent damaging the tank in the event of a sudden decrease in water level. MIC-04-09-00005

9.2.2.2.1.4 Piping

Carbon steel is used for the CCWS piping. Piping joints and connections are welded, except where flanged connections are required. With regard to isolation of the RCP thermal barrier, piping between the check valves (NCS-VLV-405A, B, C and D) and motor-operated valves (NCS-FCV-129B, 130B, 131B, and 132B) is designed for RCS rated conditions.

CCWS supply lines which supply cooling water to the safety related SSCs and to the RCPs are designed to withstand the high energy line break (HELB) as defined in BTP ASB 3-3, and to the requirements of seismic Category I, Quality Group C, and ASME Section III Class 3.

9.2.2.2.1.5 Valves

The following summarizes the major CCWS valves and their functions. Table 9.2.2-7 provides a listing of valves and the Class 1E power source.

- **Header tie line isolation valve (Supply valves NCS-MOV-020A/B/C/D and Return valves NCS-MOV-007A/B/C/D)**

Each safety train has both supply and return header tie line isolation valves so that a single failure of one of the safety trains will not impact the other safety trains.The function of this motor operated valve is to separate each subsystem into two independent trains during abnormal and accident conditions. This ensures each safety train is isolated from a potential passive failure in the non-safety portion or another safety train of the CCWS.

Table 9.2.2-3 Component Cooling Water System Failure Modes and Effects Analysis (Sheet 4 of 4)

Item	Component	Safety Function	Failure Mode	Effect on System Safety Function	Failure Detection Method
11	Containment isolation valve for supply to RCP (MOV-402A,B)	Closes to provide containment pressure boundary	Fail to close on the remote manual signal	None A check valve (VLV-403A,B) is provided in series to provide containment pressure boundary.	Valve (motor operated valve) position indication in MCR
12	Containment isolation valve (inside CV) for return line from RCP (MOV-436A,B)	Closes to provide containment pressure boundary	Fail to close on the remote manual signal	None A motor operated valve (MOV-438A,B) is provided in series to provide containment pressure boundary.	Valve position indication in MCR
13	Containment isolation valve (outside CV) for return line from RCP (MOV-438A,B)	Closes to provide containment pressure boundary	Fail to close on the remote manual signal	None A motor operated valve (MOV-436A,B) is provided in series to provide containment pressure boundary.	Valve position indication in MCR
14	CS/RHR HX cooling water outlet 2nd valve (MOV-146A,B,C,D)	Opens to provide flow path to CS/RHR heat exchanger	Fails to open upon the demand signal	None Remaining three 50% capacity CS/RHR Heat Exchanger are available. Minimum two heat exchangers are required.	Valve position indication in MCR.
		Isolates the supply line to CS/RHR heat exchanger (In case the respective CCW pump stops)	Fails to close on the demand signal	None Two isolation valves (MOV-145A,B,C,D and MOV-146A,B,C,D) are provided in series. Closure of one valve provides isolation.	Valve position indication in MCR

MIC-04-09-00002

Note 1: As discussed in Subsection 9.2.2.2.2.4, header tie line isolation valve closure is assumed within 24 hours, by manual operation from the MCR, after an ECCS signal to establish separation of the two trains within a subsystem. Prior to closure of the header tie line isolation valves, there is the potential for additional loading on one train of a subsystem if a single failure is postulated in the other train (e.g., Given a ECCS automatic initiation signal and a single

9.4 Air Conditioning, Heating, Cooling, and Ventilation Systems

This section describes the heating, ventilation and air conditioning (HVAC) systems serving the plant during normal and abnormal conditions including SBO. HVAC systems are designed to provide suitable environment for plant equipment and personnel. Ventilation zones, air distribution and airflow migrations are configured and arranged so that the ventilation air is drawn from the clean areas to areas of potentially greater radioactive contamination to a final filtration and exhaust systems discharging to the plant vent stack.

The HVAC systems airflow diagrams are shown on Figures 9.4.1-1 through 9.4.6-1. The area temperature and relative humidity during the plant normal and abnormal condition, including accident condition and LOOP condition, are described in Table 9.4-1.

The following are the reference sections where the various HVAC and related systems are covered:

Title	Section
Chilled Water System	9.2.7
Main Control Room HVAC System	9.4.1
Spent Fuel Pit Area Ventilation System	9.4.2
Auxiliary Building Ventilation System	9.4.3
Turbine Building Area Ventilation System	9.4.4
Engineered Safety Feature Ventilation System	9.4.5
Containment Ventilation System	9.4.6

The main control room heating, ventilation and air conditioning system, the auxiliary building ventilation system, the engineered safety feature ventilation system and the containment ventilation system are all subject to the design objectives of RG 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life-Cycle Planning" as it pertains to airborne radioactive material. A discussion of the design objectives and operational programs to address these radiological aspects of the system is contained in DCD Subsection 12.3.1. System and component design features addressing RG 4.21 (Ref.9.4.8-29) are summarized in Table 12.3-8~~–~~. MIC-04-09-00007

9.4.1 Main Control Room Heating, Ventilation and Air Conditioning System

The MCR HVAC System is designed to provide and control the proper environment in the MCR and other areas within the control room envelope (CRE) as defined in Chapter 6, Section 6.4. The MCR HVAC system complies with:

- 10 CFR 50, Appendix A, GDC 2,3,4,19
- 10 CFR 50.63
- RGs, 1.29, 1.52, 1.78, 1.155, 1.196, 1.197, and 4.21

These links will include both verbal and data communications. A firewall system An isolation device, which provides a hardware-based unidirectional interface, is provided to protect the plant broadband systems. The use of these alternate links provides access to the nationwide telephone system. They allow the plant to operate and meet regulatory requirements. MIC-04-09-00001

9.5.2.2.5.2 Emergency Communications

Effective emergency onsite and plant-to-offsite communications is provided by the onsite PABX and the offsite emergency response center PABX systems. These systems allow for communications during normal as well as off normal situations including design basis accidents, fire, and LOOP.

The offsite communication system is located in the offsite emergency response center identified in 10 CFR 50.47 (b)(8). It is described by the COL Applicant. The effectiveness of the over all Emergency Response Plan pursuant to 10 CFR 50.47 (b)(8) (Ref. 9.5.2-2) is addressed by the COL Applicant.

The PA/PL, PABX, and plant radio systems are normally used for intra-plant normal and emergency communications with the SPTS providing additional capability and backup.

Radiation and fire alarms have priority over page. When the page system receives alarm inputs from the fire or radiation panels, it automatically provides audible messages and tone annunciation in accordance with specified schedules.

The following radio systems provide both in-plant and plant-to-offsite emergency communications:

- Crisis management radio systems in accordance with the intent of NUREG-0654 (Ref. 9.5.2-24)
- Fire brigade radio system, in accordance with BTP SPLB 9.5-1, position C.5.g(4) (Ref. 9.5.2-25)

The emergency offsite communication system, including the crisis management radio system, is addressed by the COL Applicant. The fire brigade radio system is site-specific, consisting of a base unit, mobile units, and portable units, also is addressed by the COL Applicant.

9.5.2.3 Safety Evaluation

Plant communication systems are not required to mitigate a design basis accident, however they are important to safety. These systems are needed to support effective normal and off-normal operations as well as to coordinate on-site and off-site responses during abnormal or emergency events. The off-site communications systems within the one-site operations support center provide for emergency response following a design basis accident. Redundant communication paths and technologies are employed to minimize the possibility of complete loss of on-site and off-site communications.

Table 9A-1 US-APWR Fire Areas and Fire Zones (Sheet 16 of 17)

Building	Train	Fire Area	Fire Area Designation	Fire Zone	Fire Zone Designation
T/B	N	FA6-101	Turbine Building	FA6-101-01	Turbine Building B1F Floor
T/B	N	FA6-101		FA6-101-02	Turbine Building 1F Floor
T/B	N	FA6-101		FA6-101-03	Electrical Room (1F)
T/B	N	FA6-101		FA6-101-04	FA6-101-04 Zone
T/B	N	FA6-101		FA6-101-05	FA6-101-05 Stairwell
T/B	N	FA6-101		FA6-101-06	FA6-101-06 Stairwell
T/B	N	FA6-101		FA6-101-07	FA6-101-07 E.V Shaft
T/B	N	FA6-101		FA6-101-08	FA6-101-08 Stairwell
T/B	N	FA6-101		FA6-101-09	FA6-101-09 Stairwell
T/B	N	FA6-101		FA6-101-11	FA6-101-11 Stairwell
T/B	N	FA6-101		FA6-101-12	Sampling Room
T/B	N	FA6-101		FA6-101-13	Turbine Building 2F Floor
T/B	N	FA6-101		FA6-101-14	Electrical Room (2F)
T/B	N	FA6-101		FA6-101-15	FA6-101-15 Zone

MIC-04-09-00006

Table 9A-2 Fire Hazard Analysis Summary (Sheet 277 of 306)

Fire Zone:	**FA6-101-03**
Building:	**Turbine**
Floor(s):	**1F**
Fig:	**9A-21**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**Electrical Room (1F)**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 13, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	Floor	Ceiling
FA6-101-02 **FA6-101-04** ~~**FA6-101-07**~~ **FA6-101-09** **FA6-101-15**	~~**FA6-101-10**~~ ~~**FA6-101-15**~~	**FA6-101-14**

Fire Barrier Description:
This Electric Room is separated from the adjacent turbine building fire zones and fire areas with a 3-hour fire rated wall with all penetrations and openings protected to 3-hour fire resistance.

MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Battery	**1.4E+07**
Charger	**5.2E+06**
Switchgear and Control Centers	**4.4E+07**
High Voltage Cables	**5.2E+07**
Low Voltage Cables	**3.9E+07**
Control Cables	**6.9E+07**
Instrumentation Cables	**6.0E+07**

Fire Detection – Primary	Fire Detection - Backup
Automatic smoke	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Double-interlock pre-action supression system	**Fire Hose Station**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**2.2E+04**
Maximum Anticipated Combustible Loading:	**2.7E+04**

Floor Area (ft^2)
12,750

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A quickly detected and suppressed fire in this room will minimize fire damage to the safety-related equipment consistent with GDC-3.	**There is no safe-shutdown circuit in this fire zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 278 of 306)

Fire Zone:	**FA6-101-04**
Building:	**Turbine**
Floor(s):	**1F**
Fig:	**9A-21**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**FA6-101-04 Zone**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 13, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	~~Floor~~Wall	Ceiling
FA2-102-01		**FA6-101-15**
FA2-108-01	**FA3-111-03**	
FA2-201-01	**FA6-101-02**	
FA2-206-01	**FA6-101-03**	**See Table 9A-3**
	FA6-101-07	

Fire Barrier Description: **The turbine building is separated from the adjacent R/B and power source building with a 3-hour fire rated wall with all penetrations and openings protected to 3-hour fire resistance.**

MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
High Voltage Cables	**4.5E+07**
Low Voltage Cables	**3.4E+07**
Control Cables	**6.1E+07**
Instrumentation Cables	**5.3E+07**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Wet Pipe Sprinkler	**Fire Hose Station**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**2.1E+04**
Maximum Anticipated Combustible Loading:	**2.5E+04**

Floor Area (ft^2)
9,300

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
The wet-pipe extinguishing system provides protection to prevent a severe fire in this area. This will minimize damage from a severe fire.	**There is no safe-shutdown circuit in this fire zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 279 of 306)

Fire Zone:	**FA6-101-05**
Building:	**Turbine**
Floor(s):	**1F to Roof**
Fig:	**9A-21 to 9A-26**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**FA6-101-05 Stairwell**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 10, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	~~Floor~~Wall	Ceiling
FA6-101-02 **FA6-101-13** **FA6-101-17** **FA6-101-19**	**FA6-101-22**	**Roof**

Fire Barrier Description: MIC-04-09-00006

A two hour fire barrier surrounds the stairwell shaft. All penetrations into or from the shaft are protected for 2-hours fire resistance. Doors to the stairwell are rated to 1 ½ hours fire resistance. The stair well is designed to meet IBC requirements.

Potential Combustibles	
Item	Heat Release (Btu)
Transient Only	**9.3E+04**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Fire Hose Station	**Portable Fire Extinguisher**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**nil**
Maximum Anticipated Combustible Loading:	**2.7E+02**

Floor Area (ft^2)
350

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A fire in this area credibly involves transient material which personnel would notice a fire involving and initiate fire suppression using portable extinguishers or manual hose streams before damage.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 280 of 306)

Fire Zone:	**FA6-101-06**
Building:	**Turbine**
Floor(s):	**1F to Roof**
Fig:	**9A-21 to 9A-26**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**FA6-101-06 Stairwell**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 10, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	~~Floor~~Wall	Ceiling
FA6-101-02	**FA6-101-23**	**Roof**
FA6-101-13	**FA6-101-16**	
FA6-101-17		
FA6-101-19		

Fire Barrier Description:

A two hour fire barrier surrounds the stairwell shaft. All penetrations into or from the shaft are protected for 2-hours fire resistance. Doors to the stairwell are rated to 1 ½ hours fire resistance. The stair well is designed to meet IBC requirements.

MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Transient Only	**9.3E+04**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Fire Hose Station	**Portable Fire Extinguisher**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**nil**
Maximum Anticipated Combustible Loading:	**2.1E+02**

Floor Area (ft^2)
450

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A fire in this area credibly involves transient material which personnel would notice a fire involving and initiate fire suppression using portable extinguishers or manual hose streams before damage.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 281 of 306)

Fire Zone:	**FA6-101-07**
Building:	**Turbine**
Floor(s):	**1F to Roof**
Fig:	**9A-21 to 9A-26**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**FA6-101-07 E.V Shaft**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 10, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	Floor	Ceiling
FA6-101-02 ~~**FA6-101-03**~~ **FA6-101-04** **FA6-101-08** **FA6-101-13**	**FA6-101-01** **See Table 9A-3**	**Roof**

Fire Barrier Description:

A two hour fire barrier surrounds the elevator shaft. All penetrations into or from the shaft are protected for 2-hours fire resistance. Doors to the elevator are rated to 1 ½ hours fire resistance. The elevator shaft designed to meet IBC and ASME 17 requirements.

MIC-04-09-00006

MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Transient Only	**9.3E+04**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**
Fire Suppression – Primary	Fire Suppression - Backup
Fire Hose Station	**Portable Fire Extinguisher**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**nil**
Maximum Anticipated Combustible Loading:	**6.2E+02**

Floor Area (ft^2)
150

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A fire in this area credibly involves transient material which personnel would notice a fire involving and initiate fire suppression using portable extinguishers or manual hose streams before damage.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 284 of 306)

Fire Zone:	**FA6-101-11**
Building:	**Turbine**
Floor(s):	**1F to Roof**
Fig:	**9A-21 to 9A-26**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**FA6-101-11 Stairwell**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 10, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	Floor	Ceiling
FA6-101-02	**-**	**Roof**
FA6-101-13	**See Table 9A-3**	
FA6-101-17		
FA6-101-19		

Fire Barrier Description:
A two hour fire barrier surrounds the stairwell shaft. All penetrations into or from the shaft are protected for 2-hours fire resistance. Doors to the stairwell are rated to 1 ½ hours fire resistance. The stair well is designed to meet IBC requirements.

MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Transient Only	**9.3E+04**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Fire Hose Station	**Portable Fire Extinguisher**

Fire Zone Combustible Summary	Btu/ft^2
Anticipated Combustible Loading:	**nil**
Maximum Anticipated Combustible Loading:	**1.9E+02**

Floor Area (ft^2)
500

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A fire in this area credibly involves transient material which personnel would notice a fire involving and initiate fire suppression using portable extinguishers or manual hose streams before damage.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 287 of 306)

Fire Zone:	**FA6-101-14**
Building:	**Turbine**
Floor(s):	**2F**
Fig:	**9A-22**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**Electrical Room (2F)**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 13, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	Floor	Ceiling
~~FA6-101-07~~ **FA6-101-09** **FA6-101-13** **FA6-101-15**	**FA6-101-03** ~~See Table 9A-3~~	**FA6-101-18** **Roof**

Fire Barrier Description:
This Electric Room is separated from the adjacent turbine building fire zones and fire areas with a 3-hour fire rated wall with all penetrations and openings protected to 3-hour fire resistance. MIC-04-09-00006 MIC-04-09-00006

Potential Combustibles	
Item	**Heat Release (Btu)**
Battery	**1.4E+07**
Charger	**5.2E+06**
Switchgear and Control Center	**3.2E+07**
High Voltage Cables	**5.2E+07**
Low Voltage Cables	**3.9E+07**
Control Cables	**6.9E+07**
Instrumentation Cables	**6.0E+07**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**
Fire Suppression – Primary	**Fire Suppression - Backup**
Double-interlock pre-action suppression system	**Fire Hose Station**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**2.1E+04**
Maximum Anticipated Combustible Loading:	**2.5E+04**

Floor Area (ft^2)
12,850

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
An quickly identified and suppressed fire will serve to minimize adverse impact and recovery cost after a fire.	**There is no safe-shutdown circuit in this fire zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 289 of 306)

Fire Zone:	**FA6-101-16**
Building:	**Turbine**
Floor(s):	**2F**
Fig:	**9A-22**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**Turbine Lube Oil Tank Room**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 13, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)

Wall	Floor	Ceiling
FA6-101-13 **FA6-101-15** **FA6-101-06**	**FA6-101-02**	**FA6-101-17**

Fire Barrier Description:
The turbine building is separated from the adjacent R/B and power source building with a 3-hour fire rated wall with all penetrations and openings protected to 3-hour fire resistance. The turbine oil tank room protected with 3-hour fire walls. MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Lube Oil	**4.6E+09**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Wet Pipe Sprinkler	**Fire Hose Station**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**1.9E+06**
Maximum Anticipated Combustible Loading:	**2.3E+06**

Floor Area (ft^2)
2,400

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
The wet-pipe extinguishing system provides protection to prevent a severe fire in this area. This will minimize damage from a severe fire.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-2 Fire Hazard Analysis Summary (Sheet 293 of 306)

Fire Zone:	**FA6-101-20**
Building:	**Turbine**
Floor(s):	**4F**
Fig:	**9A-24**
Sect:	**3.143**
Area Designation:	**Turbine Building**
Zone Designation:	**Tool Room (FA6-101-20)**
Associated Safety Division(s)	**N**
Applicable Regulatory and Code Ref(s):	**IBC, RG 1.189; NFPA 10, 14, 72 and 804**

Adjacent Fire Zones: (Primary Inter face Listed See Table 9A-3 For Complete Listing)	Wall	Floor	Ceiling
	FA6-101-19 **FA6-101-11**	**FA6-101-17**	**FA6-101-19**

Fire Barrier Description:
The turbine building is separated from the adjacent R/B and power source building with a 3-hour fire rated wall with all penetrations and openings protected to 3-hour fire resistance. Other walls are not assigned a fire rating. MIC-04-09-00006

Potential Combustibles	
Item	Heat Release (Btu)
Transient Only	**9.3E+04**

Fire Detection – Primary	Fire Detection - Backup
There is no automatic detection.	**Manual Fire Alarm Pull Station**

Fire Suppression – Primary	Fire Suppression - Backup
Fire Hose Station	**Portable Fire Extinguisher**

Fire Zone Combustible Summary	
	Btu/ft^2
Anticipated Combustible Loading:	**nil**
Maximum Anticipated Combustible Loading:	**1.2E+02**

Floor Area (ft^2)
750

Fire Impact to Zone	
Suppression System Operates	Suppression System Fails to Op.
A fire in this area credibly involves transient material which personnel would notice a fire involving and initiate fire suppression using portable extinguishers or manual hose streams before damage.	**There is no safe-shutdown circuit in this zone to be damaged.**

Table 9A-3 Fire Zone/Fire Area Interfaces (Sheet 30 of 33)

Fire Zone	Interface	Adjacent Fire Zones
FA4-101-22	Ceiling	FA4-101-09, FA4-101-10, FA4-101-11, FA4-101-12
	Wall	FA3-112-01, FA3-113-02, FA3-120-01, FA3-134-01, FA4-101-01, FA4-101-04, FA5-101-01
FA4-101-23	Ceiling	Roof
	Floor	FA4-101-18
	Wall	FA2-214-07, FA2-509-01, FA2-510-02, FA4-101-10, FA4-101-24
FA4-101-24	Ceiling	Roof
	Floor	FA4-101-18, FA4-101-20
	Wall	FA2-118-01, FA2-119-01, FA2-214-07, FA4-101-02, FA4-101-23
FA4-101-25	Ceiling	FA4-101-04
	Wall	FA4-101-01
FA5-101-01	Ceiling	FA5-101-02, Roof
	Wall	FA4-101-01, FA4-101-04, FA4-101-09, FA4-101-10, FA4-101-11, FA4-101-12, FA4-101-14, FA4-101-22, FA5-101-02
FA5-101-02	Ceiling	Roof
	Floor	FA5-101-01
	Wall	FA4-101-10, FA4-101-11, FA4-101-12, FA5-101-01
FA6-101-01	Ceiling	FA6-101-02, FA6-101-07, FA6-101-08, FA6-101-12
FA6-101-02	Ceiling	FA6-101-13, FA6-101-16
	Floor	FA6-101-01
	Wall	FA6-101-03, FA6-101-04, FA6-101-05, FA6-101-06, FA6-101-07, FA6-101-08, FA6-101-11, FA6-101-12, FA6-101-15
FA6-101-03	Ceiling	FA6-101-14
	Wall	FA6-101-02, FA6-101-04, ~~FA6-101-07,~~ FA6-101-09~~, FA6-101-10~~, FA6-101-15
FA6-101-04	Ceiling	FA6-101-15
	Wall	FA2-102-01, FA2-108-01, FA2-201-01, FA2-206-01, FA3-111-03, FA6-101-02, FA6-101-03, FA6-101-07, FA6-101-08
FA6-101-05	Ceiling	Roof
	Wall	FA6-101-02, FA6-101-13, FA6-101-17, FA6-101-19, FA6-101-22
FA6-101-06	Ceiling	Roof
	Wall	FA6-101-02, FA6-101-13, FA6-101-16, FA6-101-17, FA6-101-19, FA6-101-23

MIC-04-09-00006

MIC-04-09-00006

Table 9A-3 Fire Zone/Fire Area Interfaces (Sheet 31 of 33)

Fire Zone	Interface	Adjacent Fire Zones	
FA6-101-07	Ceiling	Roof	
	Floor	FA6-101-01	
	Wall	FA6-101-02, ~~FA6-101-03,~~ FA6-101-04, FA6-101-08, FA6-101-13, ~~FA6-101-14,~~ FA6-101-15, FA6-101-17, FA6-101-19	MIC-04-09-00006
FA6-101-08	Ceiling	Roof	
	Floor	FA6-101-01	
	Wall	FA6-101-02, FA4-101-04, FA6-101-07, FA6-101-13, FA6-101-15, FA6-101-17, FA6-101-19	MIC-04-09-00006
FA6-101-09	Ceiling	Roof	
	Wall	FA6-101-03, FA6-101-14, FA6-101-18	
FA6-101-11	Ceiling	Roof	
	Wall	FA6-101-02, FA6-101-13, FA6-101-17, FA6-101-19, FA6-101-20	MIC-04-09-00006
FA6-101-12	Ceiling	FA6-101-13	
	Floor	FA6-101-01	
	Wall	FA6-101-02	
FA6-101-13	Ceiling	FA6-101-17	
	Floor	FA6-101-02, FA6-101-12	
	Wall	FA6-101-05, FA6-101-06, FA6-101-07, FA6-101-08, FA6-101-11, FA6-101-14, FA6-101-15, FA6-101-16	
FA6-101-14	Ceiling	FA6-101-18, Roof	
	Floor	FA6-101-03	
	Wall	~~FA6-101-07,~~ FA6-101-09, ~~FA6-101-10,~~ FA6-101-13, FA6-101-15	MIC-04-09-00006
FA6-101-15	Ceiling	Roof	
	Floor	FA6-101-04	
	Wall	FA6-101-02, FA6-101-03, FA6-101-07, FA6-101-08, FA6-101-13, FA6-101-14, FA6-101-16	
FA6-101-16	Ceiling	FA6-101-17	
	Floor	FA6-101-02	
	Wall	FA6-101-06, FA6-101-13, FA6-101-15	MIC-04-09-00006
FA6-101-17	Ceiling	FA6-101-19, FA6-101-20, FA6-101-21, Roof	
	Floor	FA6-101-13, FA6-101-16	
	Wall	FA6-101-05, FA6-101-06, FA6-101-07, FA6-101-08, FA6-101-11	

Table 9A-3 Fire Zone/Fire Area Interfaces (Sheet 32 of 33)

Fire Zone	Interface	Adjacent Fire Zones
FA6-101-18	Ceiling	Roof
	Floor	FA6-101-14
	Wall	FA6-101-09
FA6-101-19	Ceiling	FA6-101-22, FA6-101-23, Roof
	Floor	FA6-101-17, FA6-101-20, FA6-101-21
	Wall	FA6-101-05, FA6-101-06, FA6-101-07, FA6-101-08, FA6-101-11, FA6-101-20, FA6-101-21
FA6-101-20	Ceiling	FA6-101-19
	Floor	FA6-101-17
	Wall	FA6-101-11, FA6-101-19
FA6-101-21	Ceiling	FA6-101-19
	Floor	FA6-101-17
	Wall	FA6-101-19
FA6-101-22	Ceiling	Roof
	Floor	FA6-101-19
	Wall	FA6-101-05
FA6-101-23	Ceiling	Roof
	Floor	FA6-101-19
	Wall	FA6-101-06
FA7-101-01	Ceiling	FA7-102-01
	Wall	FA2-102-01, FA2-104-01, FA3-101-01, FA3-128-01, FA7-102-01
FA7-102-01	Floor	FA7-101-01
	Wall	FA2-105-01, FA3-128-01, FA7-101-01, FA7-103-01
FA7-103-01	Floor	FA7-104-01
	Wall	FA2-106-01, FA3-108-01, FA7-102-01, FA7-104-01
FA7-104-01	Ceiling	FA7-103-01
	Wall	FA2-107-01, FA2-108-01, FA3-108-01 FA3-110-01, FA3-111-01, FA3-111-02, FA3-112-01, FA3-113-01, FA3-121-01, FA3-131-01, FA3-135-01, FA7-103-01
FA7-401-01	Floor	FA7-103-01, FA7-104-01
	Wall	FA3-103-02, FA3-104-02, FA7-102-01, FA7-103-01, FA7-402-01, FA7-403-01

MIC-04-09-00006

MIC-04-09-00006

Security-Related Information - Withheld Under 10 CFR 2.390

Figure 9A-1 Fire Zones and Fire Areas R/B EL -26'-4" (B1F)

Tier 2

Chapter 10

Chapter 10 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_12.03-53	10.4.11.2.1	10.4-126	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about function of isolation valve which is installed in the line from the condensate storage tank to the auxiliary boiler. Added a sentence, "This design feature meets the guidance of RG 4.21 and the requirements of 10 CFR 20.1406 for prevention of contamination of the facility and the environment."	-
DCD_12.03-50	10.4.11.2.1	10.4-126	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Added description about leak detection instruments.	-
DCD_01.05-4	10.4.9.2.1	10.4-88	Response to Fukushima-related RAI No. 1043 MHI Letter No. UAP-HF-13204 Date 08/13/2013	A paragraph was revised to describe an additional branch line for EFW pit makeup.	-
DCD_01.05-4	Figure 10.4.9-1	10.4-110	Response to Fukushima-related RAI No. 1043 MHI Letter No.	The P&ID was revised to add an additional branch line for EFW pit	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			UAP-HF-13204 Date 08/13/2013	makeup.	
DCD_14.03.07-94	10.2.6	10.2-27	Response to RAI No. 1052 MHI Letter No. UAP-HF-13237 Date 9/20/2013	Technical report MUAP-07028 and MUAP-07029 are regarded as Tier 2* due to the designation by NRC.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

10.2-2 U.S. Nuclear Regulatory Commission, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-800, Section 3.5.1.3 Rev.3, March 2007.

10.2-3 U.S. Nuclear Regulatory Commission, Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-800, Section 10.2 Rev.3, March 2007.

10.2-4 U.S. Nuclear Regulatory Commission, Operating Experience Feedback Report - Turbine-Generator Overspeed Protection Systems, NUREG-1275, Vol. 11, April 1995

10.2-5 Standard Specification for Vacuum-Treated Carbon and Alloy Steel Forgings for Turbine Rotors and Shafts, ASTM A470

10.2-6 Standard Test Methods and Definitions for Mechanical Testing of Steel Products, ASTM A370

10.2-7 Rules for Construction of Nuclear Facility Components, ASME Boiler and Pressure Vessel Code, Section III

10.2-8 Nondestructive Examination, ASME Boiler and Pressure Vessel Code, Section V

10.2-9 [*Probability of Missile Generation from Low Pressure Turbines, MUAP-07028-P Rev.2 (Proprietary) and MUAP-07028-NP Rev.2 (Non-Proprietary), June 2013*]* DCD_14.03.07-94

10.2-10 [*Probabilistic Evaluation of Turbine Valve Test Frequency, MUAP-07029-P Rev.3 (Proprietary) and MUAP-07029-NP Rev.3 (Non-Proprietary), June 2013*]*

Information in this subsection that is italicized and enclosed in square brackets with an asterisk following the closing bracket is a special category of information designated by the NRC as Tier 2*. Any change to this information requires prior NRC approval.

Tier 2

Chapter 11

Chapter 11 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_12.03-51	Table 11.2-8	11.2-28	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291 Date 12/06/2013	Revised Note 1 and 3.	-
DCD_12.03-68	11.2.2.1.2.3	11.2-11	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Deleted the description about transfer of the drain water from the refueling cavity. Added "CVDT pumps" to specify the pump name. Added the description regarding the water transfer from refueling cavity to the RWSP.	-
MIC-04-11-00002	Table 11.3-10	11.3-37	Consistency with design	Description in Table 11.3-10 “Instrument Indication and Alarm Information Page” is revised confirming with design document. - Delete the Low alarm of the Compressor seal water temperature. . - Delete the High alarm of the Molecular sieve waste effluent gas temperature.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-11-00001	11.4.1.4 11.4.1.6 11.4.9	11.4-5 11.4-6 11.4-20	Consistency to the response to RAI 534-4256	The version of ANSI/ANS-40.37 endorsed by RG 1.143 was changed from 1993 to 2009.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

Table 11.3-10 Instrument Indication and Alarm Information Page

Instrumentation	Readout Indication	Alarm
Waste Gas Compressor		
Gas inlet pressure (recirculation line pressure)	X	High
Compressor seal water temperature	X	High~~/Low~~ MIC-04-11-00002
Moisture separator level	X	High/Low
Moisture separator pressure	X	High/Low
Gas Surge Tanks		
Gas inlet pressure	X	High
Gas Dryer skid: **Waste Gas Cooler**		
Outlet gas temperature	X	High
Moisture separator level for waste gas cooler	X	High/Low
Gas Dryer skid: **Waste Gas Molecular Sieve Tank**		
Molecular sieve vessel gas temperature	X	High/Low
Molecular sieve regeneration gas outlet temperature	X	High
~~Molecular sieve waste effluent gas temperature~~	~~X~~	~~High~~ MIC-04-11-00002
Nitrogen gas flow rate for molecular sieve regeneration	X	High/Low
Dew Point Monitor		
Gas dew point temperature	X	High
Charcoal Beds		
Gas inlet temperature	X	High
Gas inlet pressure	X	High
Radiation Monitor		
Gas outlet radiation dose	X	High
Oxygen & Hydrogen analyzers		
Oxygen concentration	X	High
Hydrogen gas concentration	X	High
Oxygen analyzer skid（including two analyzers）		
Oxygen concentration	X	High

- The SWMS is designed to operate continuously during normal condition and AOOs. For equipment sizing and process capability determination, the SWMS is designed to process the maximum design basis input in one week, assuming 40 hours work week, or processing one tank of SRST in one operating shift, whichever is controlling. When wastes are accumulated in excess of the normal operation, additional solid waste processing can be performed.

- The SWMS, including the modular de-watering subsystem, is connected to non-radioactive systems such as the PMW, nitrogen, and service air systems. The non-radioactive connections (e.g., PMW for flushing, nitrogen gas for sluicing spent resin, and service air to operate valves and pumps) to the SWMS components, including the modular de-watering system, contain double isolation valves and special fittings (e.g., one check valve and one isolation valve) to minimize the potential for cross contamination of the non-radioactive system. Table 11.4-7 contains typical service level II concrete systems such as coating types, dry film thicknesses (DFT), and specific permeabilities for the three typical epoxy coatings. This table provides typical Service level II concrete epoxy coatings, but approved equivalent Service level II concrete epoxy coatings can be utilized as a liner. These methods provide compliance with 10 CFR 20.1406 (Ref. 11.4-16)

- Each of the SRST cubicles is designed to contain the maximum liquid inventory in the event that the tank ruptures. These cubicles are coated with an impermeable epoxy liner (coating), up to the cubicle wall height equivalent to the full tank volume, to facilitate decontamination of the facility in the event of tank leakage and failure. This design feature, in conjunction with early leak detection, drainage and transfer capabilities serves to minimize the release of the radioactive liquid to the groundwater and environment in accordance with the BTP 11-6 (Ref. 11.4-36) and 10 CFR 20.1406 (Ref. 11.4-16). As an additional precaution, the COL Applicant is also required to provide an environmental monitoring system (Subsection 11.5.5).

- The SWMS has a temporary equipment connection for sending the waste directly to mobile equipment or to a high-integrity container for processing the solid radwaste. This connection meets RG 1.143 (Ref. 11.4-1) and ANSI/ANS-40.37-~~1993~~2009 “Mobile Low-level Radioactive Waste Processing Systems” (Ref. 11.4-17) or its equivalent requirements at the time of use. MIC-04-11-00001

11.4.1.5 Site-Specific Cost-Benefit Analysis

The SWMS is designed to be used for any site or plant. The design is flexible so that site-specific requirements, such as preference of technologies, degree of automated operation, and radioactive waste storage, can be incorporated with minor modifications to the design.

RG 1.110 (Ref. 11.4-13) outlines compliance with to 10 CFR 50, Appendix I (Ref. 11.4-12) numerical guidelines for offsite radiation doses as a result of gaseous or liquid radioactive effluents during normal operations, including AOOs. The cost-benefit numerical analysis as required by 10 CFR 50, Appendix I (Ref. 11.4-12), Section II,

Paragraph D demonstrates that the addition of items of reasonably demonstrated technology will not provide a favorable cost benefit. The COL Applicant will perform a site-specific cost benefit analysis to demonstrate compliance with the regulatory requirements.

11.4.1.6 Mobile or Temporary Equipment

The SWMS is designed with permanently installed equipment (i.e., tanks and a crane, etc.), modular equipment (the spent resin de-watering subsystem), and some mobile equipment. The purpose of the modular and mobile design is to provide ease of equipment replacement due to either advances in treatment technologies and/or broken equipment and is further discussed in Subsections 11.4.2, 11.4.4, and 11.4.4.5. The provision and conformance requirements for the mobile system or temporary equipment for solid radioactive waste processing shall be in accordance with ANSI/ANS-40.37-~~1993~~2009: Mobile Radioactive Waste Processing Systems or its equivalent standard at the time of use. The COL Applicant is responsible for ensuring that mobile and temporary solid radwaste processing equipment and its interconnection to plant systems conforms to regulatory requirements and guidance such as 10 CFR 50.34a (Ref. 11.4-11), 10 CFR 20.1406 (Ref.11.4-16) and RG 1.143 (Ref. 11.4-1). MIC-04-11-00001

11.4.2 System Description

The SWMS controls, collects, handles, processes, packages, and temporarily stores dry and wet solid waste generated by the plant prior to offsite shipping and disposal resulting from normal operations, including AOOs. The SWMS processes and packages waste from the LWMS, the CVCS, and the SFPCS. The SWMS also can receive solid waste from the CPS and the SG blowdown when the waste becomes radioactive. Waste from these systems consists of spent resin, spent charcoal, sludge, general contaminated plant debris, and spent filter elements. As these waste types differ in characteristics and contamination levels, the SWMS is divided into five subsystems that handle the following waste types:

- Dry active waste
- Spent filter elements
- Spent resin
- Spent activated carbon
- Oil and sludge

The boundary of the SWMS starts at specific waste generation streams and ends at the waste storage and truck bay of shipment of all solid waste. There is no direct discharge of waste to the environment but the packaged wastes are transferred to licensed offsite waste processing and disposal facilities.

For spent resins and spent activated carbon, the boundary to the SWMS starts downstream of the spent resin isolation valve from each of the demineralizers and activated carbon bed. Spent resin and spent carbon are transferred into the spent resin

11.4-8 Shippers-General Requirements for Shipments and Packaging, DOT Regulations Title 49, Code of Federal Regulations, 49 CFR Part 173.

11.4-9 Solid Radioactive Waste Processing System for Light-Water-Cooled Reactor Plants. ANSI/ANS 55.1.

11.4-10 General Design Criteria for Nuclear Power Plants, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 50, Appendix A.

11.4-11 Design Objectives for Equipment to Control Releases of Radioactive Material in Effluents-Nuclear Power Reactors, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 50.34a.

11.4-12 Numerical Guides for Design Objectives and Limiting Conditions for Operation To Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents, NRC Regulations Title 10. Code of Federal Regulations, 10 CFR Part 50, Appendix I.

11.4-13 Cost-Benefit Analysis for Radwaste Systems for Light-Water-Cooled Nuclear Power Reactors. Regulatory Guide 1.110, March 1976.

11.4-14 Design Guidance for Solid Radioactive Waste Management Systems Installed in Light Water Cooled Nuclear Power, Branch Technical Position 11-3.

11.4-15 Compliance with dose limits for individual members of the public, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 20.1302.

11.4-16 Minimization of Contamination, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 20.1406.

11.4-17 Mobile Low-level Radioactive Waste Processing Systems, ANSI/ANS-40.37-~~1993~~2009. MIC-04-11-00001

11.4-18 Deleted

11.4-19 Waste classification, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 61.55.

11.4-20 Waste characteristics, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 61.56.

11.4-21 Requirements for Transfers of Low-Level Radioactive Waste Intended for Disposal at Licensed Land Disposal Facilities and Manifests, NRC Regulations Title 10, Code of Federal Regulations, 10 CFR Part 20, Appendix G.

11.4-22 Deleted

11.4-23 Nuclear Energy Institute, Generic FSAR Template for Process Control Program, NEI 07-10A, Revision 0.

Tier 2

Chapter 12

Chapter 12 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_12.03-50	Table 12.3-8 (Sheets 18, 68 of 76)	12.3-70, 12.3-120	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291Date 12/06/2013	Added description about liquid level switches.	-
DCD_12.03-53	Table 12.3-8 (Sheet 68 of 76)	12.3-120	Response to RAI No. 1026 MHI Letter No. UAP-HF-13291Date 12/06/2013	Added description about function of isolation valve which is installed in the line from the condensate storage tank to the auxiliary boiler.	-
DCD_12.03-66	Table 12.3-8 (Sheet 1 of 77)	12.3-53	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about prevention of overflow of the SFP.	-
DCD_12.03-63	Table 12.3-8 (Sheets 3, 21 of 77)	12.3-55, 12.3-73	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about leak detection instruments.	-
DCD_12.03-67	Table 12.3-8 (Sheet 72 of 77)	12.3-124	Response to RAI No. 1028 MHI Letter No. UAP-HF-13293 Date 12/06/2013	Added description about drain line from RWSAT.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_09.01.02-47	12.3.4.1.2	12.3-29	Response to RAI No. 1055 MHI Letter No. UAP-HF-13260 Date 11/14/2013	Revised to add the location using portable ARMS regarding containment racks.	-
DCD_12.03-70	Figure 12.3-3 (Sheets 1-4 of 10) Figure 12.3-4 (Sheets 1-4 of 10) Figure 12.3-5 (Sheets 1-4 of 10) Figure 12.3-6 (Sheets 1-4 of 10) Figure 12.3-11 (Sheets 1-4 of 10)	12.3-175 through 12.3-178 12.3-185 through 12.3-188 12.3-195 through 12.3-198 12.3-205 through 12.3-208 12.3-219 through 12.3-222	Response to RAI No. 1065 MHI Letter No. UAP-HF-13310 Date 12/26/2013	The radiation zones in the safeguard components areas and adjacent to the safeguard components areas on the post-accident radiation zone maps were changed by considering the additional dose rate from the safeguard components.	-

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Tier 2

Chapter 13

Chapter 13 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_07.09-23 S03	13.3	13.3-3	Response to Amended RAI No. 710 MHI Letter No. UAP-HF-13158 Date 11/01/2013	Revised Section 13.3.	-
MIC-04-13-00001	13.3	13.3-3	Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	Revised section 13.3	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

- A data communication system establishes the interface and link with the TSC, the EOF, and the ERDS and allows data exchange with the plant. The TSC receives plant information from the unit bus.

- The EOF and the ERDS receive plant information from the station bus.

- The following ~~countermeasures~~features are applied to ~~prevent cyber security threats~~data communication with the TSC, the EOF, and the ERDS: DCD_07.09-23 S03

  • The plant instrumentation and control (I&C) and HSI systems do not link to external networks. An exception is the link from unit management computer to the station bus.

  • Communication from the unit management computer to the station bus is restricted one direction. ~~A dedicated transmission protocol is used which is not general-purpose, such as transmission control protocol/internet protocol, user datagram protocol, etc~~via isolation device which provides hardware-based unidirectional interface" after "direction. MIC-04-13-00001

  • Communication between the station bus and the TSC, the EOF or the ERDS (NRC) is also one direction and uses a dedicated transmission protocol.

  • If a computer system, which has a general-purpose local area network, is connected to the station bus, an adequate gateway processor with a firewall function is inserted.

  • ~~The firewall program currently used is MISTY®, which uses 128-bit code key. This firewall program is safer than the data encryption standard code, which is more typically used in the U.S. Alternate firewall programs may be used in the future, as the security features of new technology evolve.~~ DCD_07.09-23 S03

• Safety Parameter Display System (SPDS)

  The SPDS provides a display of plant parameters from which the safety status of operation may be assessed in the MCR, the TSC, and the EOF. The SPDS provides the following functions:

  - The primary function of the SPDS is to help operating personnel in the MCR make quick assessments of the plant safety status.

  - Duplication of the SPDS displays in the TSC and the EOF improves the exchange of information between these facilities and the MCR and assists corporate and plant management in the decision-making process.

  - The SPDS is operated during normal operations and during all classes of emergencies.

  - The SPDS has the flexibility to allow future modifications to be incorporated, such as the capability to handle operator interaction and diagnostic analysis.

Tier 2

Chapter 14

Chapter 14 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_03.11-62	Table 14.3-2 (Sheet 4 of 4)	14.3-57	Response to Amended RAI No. 1031 MHI Letter No. UAP-HF-13176 Date 8/2/2013	"Class 1E" was deleted and "including non-metallic parts of active mechanical equipment" was added to the existing design description.	-
DCD_05.04.07-16 S01	14.2.12.1.22	14.2-56	Response to RAI No. 998 amended MHI Letter No. UAP-HF-13271 Date 11/21/2013	Reflect addition of CS/RHR pump vibration monitoring during CS/RHR pump testing at RHR mid-loop conditions.	-
DCD_05.04.07-16 S02	14.2.12.1.22	14.2-56 14.2-57	Response to RAI No. 998 amended 02 MHI Letter No. UAP-HF-14010 Date 02/03/2014	Under test method, RHRS operability is now verified by a survey for accumulated gas following pump shutdown after the Low-level mid-loop pre-op test. A corresponding acceptance criterion is added under Acceptance Criteria.	-
MIC-04-14-00001	14.3.1.2	14.3-3	Instruction by NRC on	Supplemental description was	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			7/18/2013	added to the definition of "ASME".	

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

- **ASME Code** means Section III of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. Some Tier 1 ITAAC design commitments in the US-APWR DCD specify that structures, systems, or components be designed and constructed in accordance with ASME Code Section III requirements. When this language is used, it indicates that the ITAAC for that design commitment will be met by satisfying the edition and addenda of the ASME Boiler and Pressure Vessel Code, Section III as specified in the FSAR and incorporated by reference in 10 CFR 50.55a subject to the conditions listed in 10 CFR 50.55a(b), or in accordance with alternatives to paragraphs (b), (c), (d) or (e) of 10 CFR 50.55a as authorized by the NRC pursuant to 10 CFR 50.55a(a)(3). MIC-04-14-0 0001

  Note: This definition applies to ASME Code for construction (including design) and not ASME Code for inservice testing.

- **ASME Code Report** means a report required by the ASME Code and whose content requirements are stipulated by the ASME Code. Each such ASME Code Report is final, and, when required, is certified in accordance with the Code.

- **Channel** means an arrangement of components and modules as required to generate a single protective action signal when required by a plant condition. A channel loses its identity where single protective action signals are combined.

- **Column line** is the designation applied to a plant reference grid used to define the locations of building walls and columns. Column lines may not represent the centerline of walls and columns.

- **Containment**, when this term is used as “the containment,” means the containment vessel or, as it is sometimes referred to, the prestressed concrete containment vessel.

- **Design commitment** means that portion of the design description that is verified by ITAAC.

- **Design description** means that portion of the design that is certified.

- **Design plant grade** means the elevation of the soil around the nuclear island assumed in the design (i.e., “plant grade” or “finished grade level”) in relation to plant structures to which other plant elevations are correlated and which is set at 2’-7”.

- **Division (for electrical systems)** is the designation applied to each portion of a given safety-related system (i.e., the set of connected electrical components) that is physically, electrically, and functionally independent from other redundant sets of components.

- **Division (for mechanical systems)** is the designation applied to a specific set of safety-related components that perform redundant, identical mechanical functions within a system.

Tier 2

Chapter 15

Chapter 15 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_07.05-18 S02	15.6.2.2 15.6.3.4.2	15.6-13 15.6-22	Response to RAI No. 568 amended 02 MHI Letter No. UAP-HF-13233 Date 09/11/2013	Revised subsections 15.6.2.2 and 15.6.3.4.2.	-
MIC-04-15-00003	15.0.0.1.2	15.0-3	Editorial	Change format the second “bullet” in page 15.0-3 to just “paragraph”	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

- Several additional event-specific criteria, which are described in Section 15.4.8.2.5, are applied to the rod ejection accidents.

For loss-of-coolant accidents (LOCA), the analysis criteria of 10 CFR 50.46 also apply (SRP 15.0): MIC-04-15-00003

- The calculated maximum fuel clad temperature shall not exceed 2200^{o}F.
- The calculated total oxidation of the cladding shall nowhere exceed 0.17 times the total cladding thickness before oxidation.
- The calculated total amount of hydrogen generated from the chemical reaction of the cladding with water or steam shall not exceed 0.01 times the hypothetical amount that would be generated if all the metal in the cladding cylinders surrounding the fuel, excluding the cladding surrounding the plenum volume, were to react.
- Calculated changes in core geometry shall be such that the core remains amenable to cooling.
- After successful initial operation of the emergency core cooling system (ECCS), the calculated core temperature shall be maintained at an acceptably low value and decay heat shall be removed for an extended period of time as required by the long-lived radioactivity remaining in the core.

The SRPs provide additional criteria for certain initiating events, which are described on a case-by-case basis in each respective event analysis section.

The third column of Table 15.0-1 indicates which initiating events are classified as PAs.

15.0.0.2 Plant Characteristics and Initial Conditions Assumed in the Accident Analyses

This subsection describes the plant characteristics and initial conditions assumed in the analysis of AOO and PA events. The nuclear key parameters described in this subsection will be confirmed in each reload core based on Reference 15.0-21.

15.0.0.2.1 Design Plant Conditions

Table 15.0-2 lists key rated (nominal) power conditions. Two power ratings are considered:

- The design core thermal power output.
- The design nuclear steam supply system (NSSS) thermal power output, which includes the thermal power generated by the reactor coolant pumps (RCPs).

Tier 2

Chapter 16

Chapter 16 Specification Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_04.04-43	2.0	2.0-1	Response to RAI No. 994 MHI Letter No. UAP-HF-13156 Date 07/05/2013	Revised minimum DNBR for thimble channel and hot channel to show changes in CHF correlation of uncertainty value as discussed in RAI response.	-
DCD_09.01.02-53	3.3.2 3.8.2 3.8.5 3.8.8 3.8.10 3.9.1 3.9.2 3.9.5 3.9.7	3.3.2-28 3.8.2-1 3.8.5-1 3.8.8-1 3.8.10-1 3.9.1-1 3.9.2-1 3.9.5-1 3.9.7-1	Response to RAI No. 1055 MHI Letter No. UAP-HF-13273 Date 12/02/2013	Applicability is changed to include when one or more fuel assemblies are seated in the containment racks.	-
DCD_09.01.02-51	4.3.1.3	4.0-2	Response to RAI No. 1055 MHI Letter No. UAP-HF-13273 Date 12/02/2013	Added the description about the condition to meet the requirement for maintaining reactivity controls.	-
DCD_16-305	3.4.8 3.9.6	3.4.8-6 3.9.6-5	Response to RAI No. 1058 MHI Letter No. UAP-HF-13277 Date 12/04/2013	Added SRs 3.4.8.10, 3.4.8.11 and 3.4.8.12. Added SRs 3.9.6.9, 3.9.6.10 and 3.9.6.11.	-
DCD_19-494	3.4.8	3.4.8-1 3.4.8-2	Response to Amended	Revised TS 3.4.8 (RCS Loops –	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
S03	 New 3.6.7 3.9.6	3.4.8-3 3.4.8-5 3.6.6-3 3.9.6-1 through 3.9.6-3	RAI No. 669 MHI Letter No. UAP-HF-13280 Date 12/12/2013	MODE 5, Loops Not Filled) Incorporated TS 3.6.7 (Containment Penetrations – Shutdown with RCS in Reduced Inventory) Revised TS 3.9.6 (Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level)	
DCD_16-306	3.4.8 LCO 3.4.8 3.4.8 SURVEILLANCE REQUIREMENTS SR 3.4.8.13 (New) 3.9.6 LCO 3.9.6 3.9.6 SURVEILLANCE REQUIREMENTS SR 3.9.6.12 (New)	3.4.8-1 3.4.8-2 3.4.8-6 3.9.6-1 3.9.6-2 3.9.6-6	Response to RAI No. 1071 MHI Letter No. UAP-HF-14019 Date 2/27/2014	Revised LCO description and Condition B. Added SR 3.4.8.13. Revised LCO description and Condition B. Added SR 3.9.6.12.	-
DCD_16-306	1.2 3.2.2 3.2.3	1.2-3 3.2.2-1 3.2.3-2	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date	Correction of format errors.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	3.2.4 3.3.1 3.3.2 3.3.6 3.4.6 3.4.7 3.4.8 3.4.12 3.4.16 3.5.4 3.6.2 3.6.3	3.2.4-2 3.3.1-3 through 3.3.1-5 3.3.1-7 3.3.1-11 3.3.1-12 3.3.2-3 3.3.2-4 3.3.2-8 3.3.2-9 3.3.2-11 3.3.2-12 3.3.6-3 3.4.6-2 3.4.7-2 3.4.7-3 3.4.8-2 3.4.8-3 3.4.12-4 3.4.16-1	12/26/2013		

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	3.6.6 3.7.5 3.7.9 3.7.10 3.8.1 3.8.4 3.9.4	3.5.4-1 3.6.2-4 3.6.3-8 3.6.6-1 3.7.5-1 3.7.5-2 3.7.9-2 3.7.10-3 3.8.1-2 through 3.8.1-4 3.8.4-1 3.9.4-1			
MIC-04-16-00002	Table 3.3.2-1 (Sheet 8 of 11)	3.3.2-25	Typo	Added space.	0
DCD_07.05-18 S02	Table 3.3.3-1 (page 1 of 1)	3.3.3-5	Response to RAI No. 568 amended 02 MHI Letter No. UAP-HF-13223 Date 09/11/2013	Revised Table 3.3.3-1 (page 1 of 1).	0
DCD_16-307	3.4.6	3.4.6-1 3.4.6-2	Response to RAI No. 1059 MHI Letter No. UAP-HF-	Clarification of the description.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			13315 Date 12/26/2013		
DCD_16-308	3.4.8 3.4.12	3.4.8-1 3.4.12-1	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date 12/26/2013	Correction of editorial errors.	0
MIC-04-16-00006	16.1.1.1	16.1-1	Editorial Correction	Replace “Structures” with “Structure”.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

1.2 Logical Connectors

EXAMPLES (continued)

EXAMPLE 1.2-2

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. LCO not met.	A.1 Trip . . . OR A.2.1 Verify . . . AND A.2.2.1 Reduce . . . OR A.2.2.2 Perform . . . OR A.3 Align . . .	

DCD_16-306

This example represents a more complicated use of logical connectors. Required Actions A.1, A.2, and A.3 are alternative choices, only one of which must be performed as indicated by the use of the logical connector OR and the left justified placement. Any one of these three Actions may be chosen. If A.2 is chosen, then both A.2.1 and A.2.2 must be performed as indicated by the logical connector AND. Required Action A.2.2 is met by performing A.2.2.1 or A.2.2.2. The indented position of the logical connector OR indicates that A.2.2.1 and A.2.2.2 are alternative choices, only one of which must be performed.

3.2 POWER DISTRIBUTION LIMITS

3.2.2 Nuclear Enthalpy Rise Hot Channel Factor ($F^N_{\Delta H}$)

LCO 3.2.2 $F^N_{\Delta H}$ shall be within the limits specified in the COLR.

APPLICABILITY: MODE 1.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ------------NOTE------------ Required Actions A.2 and A.3 must be completed whenever Condition A is entered. -------------------------------- $F^N_{\Delta H}$ not within limit.	A.1.1 Restore $F^N_{\Delta H}$ to within limit. <u>OR</u> A.1.2.1 Reduce THERMAL POWER to < 50% RTP. <u>AND</u> A.1.2.2 Reduce Power Range Neutron Flux - High trip setpoints to ≤ 55% RTP. <u>AND</u> A.2 Perform SR 3.2.2.1. <u>AND</u>	4 hours 4 hours 72 hours 24 hours

DCD_16-306

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. THERMAL POWER ≥ 90% RTP. <u>AND</u> AFD not within the target band.	A.1 Restore AFD to within target band.	15 minutes
B. Required Action and associated Completion Time of Condition A not met.	B.1 Reduce THERMAL POWER to < 90% RTP.	15 minutes
C. ------------NOTE---------- Required Action C.1 must be completed whenever Condition C is entered. ------------------------------- THERMAL POWER < 90% and ≥ 50% RTP with cumulative penalty deviation time > 1 hour during the previous 24 hours. <u>OR</u> THERMAL POWER < 90% and ≥ 50% RTP with AFD not within the acceptable operation limits.	C.1 Reduce THERMAL POWER to < 50% RTP.	30 minutes
D. Required Action and associated Completion Time for Condition C not met.	D.1 Reduce THERMAL POWER to < 15% RTP.	9 hours

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	A.4 Reevaluate safety analyses and confirm results remain valid for duration of operation under this condition.	Prior to increasing THERMAL POWER above the limit of Required Action A.1
	AND	
	A.5 -------------NOTES------------- 1. Perform Required Action A.5 only after Required Action A.4 is completed. 2. Required Action A.6 shall be completed whenever Required Action A.5 is performed. ------------------------------------- Normalize excore detectors to restore QPTR to within limit.	Prior to increasing THERMAL POWER above the limit of Required Action A.1
	AND	
	A.6 ---------------NOTE-------------- Perform Required Action A.6 only after Required Action A.5 is completed. ------------------------------------- Perform SR 3.2.1.1, SR 3.2.1.2, and SR 3.2.2.1.	Within 24 hours after achieving equilibrium conditions at RTP not to exceed 48 hours after increasing THERMAL POWER above the limit of Required Action A.1

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One High Power Range Neutron Flux (High Setpoint) channel inoperable.	-------------------NOTE-------------------- One channel may be bypassed for up to 12 hours for surveillance testing or setpoint adjustment, provided the other channels are OPERABLE or placed in the trip condition. --	
	E.1.1 Place channel in trip.	72 hours
	AND	
	E.1.2 Reduce THERMAL POWER to ≤ 75% RTP.	78 hours
	OR	
	E.2.1 Place channel in trip.	72 hours
	AND	
	E.2.2 --------------NOTE-------------- Only required to be performed when the Power Range Neutron Flux input to QPTR is inoperable. -------------------------------------	
	Perform SR 3.2.4.2.	Once per 12 hours
	OR	
	E.3 Be in MODE 3.	78 hours

| DCD_16-306

| DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One channel inoperable.	-------------------NOTE-------------------- One channel may be bypassed for up to 12 hours for surveillance testing, provided the other channels are OPERABLE or placed in the trip condition. ---	
	F.1 Place channel in trip.	72 hours
	OR	
	F.2 Be in MODE 3.	78 hours
G. One High Intermediate Range Neutron Flux channel inoperable.	G.1 Reduce THERMAL POWER to < P-6.	24 hours
	OR	
	G.2 Increase THERMAL POWER to > P-10.	24 hours
H. Two High Intermediate Range Neutron Flux channels inoperable.	H.1 --------------NOTE-------------- Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM. ------------------------------------- Suspend operations involving positive reactivity additions.	Immediately
	AND	
	H.2 Reduce THERMAL POWER to < P-6.	2 hours

DCD_16-306

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
I. One High Source Range Neutron Flux channel inoperable.	--------------------NOTE------------------- Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SDM. ---	
	I.1 Suspend operations involving positive reactivity additions.	Immediately
J. Two High Source Range Neutron Flux channels inoperable.	J.1 Open reactor trip breakers (RTBs).	Immediately
K. One High Source Range Neutron Flux channel inoperable.	K.1 Restore channel to OPERABLE status.	48 hours
	<u>OR</u>	
	K.2.1 Initiate action to fully insert all rods.	48 hours
	<u>AND</u>	
	K.2.2. Place the Rod Control System in a condition incapable of rod withdrawal.	49 hours

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
O. One or more channels inoperable.	O.1 Verify interlock is in required state for existing unit conditions. <u>OR</u> O.2 Be in MODE 3.	1 hour 7 hours
P. One or more trains inoperable or one or more required channels inoperable.	P.1 Verify interlock is in required state for existing unit conditions. <u>OR</u> P.2 Be in MODE 2.	1 hour 7 hours
Q. One trip mechanism inoperable for a required RTB.	Q.1 Restore inoperable trip mechanism to OPERABLE status. [<u>OR</u> Q.2 Apply the requirements of Specification 5.5.18.	48 hours 48 hours]
R. One required train inoperable.	--------------------NOTE------------------- One required train may be bypassed for up to 4 hours for surveillance testing, provided the other required trains are OPERABLE. --- R.1 Restore train to OPERABLE status. [<u>OR</u> R.2 Apply the requirements of Specification 5.5.18.	 24 hours 24 hours]

DCD_16-306
DCD_16-306

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.5	-----------------------------NOTE-------------------------- Not required to be performed until 24 hours after THERMAL POWER is ≥ 50% RTP. --- Calibrate excore channels to agree with incore detector measurements.	[92 EFPD OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.1.6	Perform MIC consistent with Specification 5.5.21, Setpoint Control Program (SCP).	[24 months OR In accordance with the Surveillance Frequency Control Program]

DCD_16-306

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.1.7	Perform CHANNEL CHECK.	Within 4 hours after reducing power below P-6 <u>AND</u> [Every 12 hours thereafter OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.1.8	Perform CHANNEL CALIBRATION consistent with Specification 5.5.21, Setpoint Control Program (SCP).	[24 months OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.1.9	-----------------------------NOTE--------------------------- Neutron detectors are excluded from CHANNEL CALIBRATION. --- Perform CHANNEL CALIBRATION consistent with Specification 5.5.21, Setpoint Control Program (SCP).	[24 months OR In accordance with the Surveillance Frequency Control Program]

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. One required Containment Pressure channel inoperable.	--------------------NOTE------------------- One required channel may be bypassed for up to 12 hours for surveillance testing, provided the other required channels are OPERABLE. --	
	E.1 Restore channel to OPERABLE status.	72 hours
	OR	
	E.2.1 Be in MODE 3.	78 hours
	AND	
	E.2.2 Be in MODE 4.	84 hours
F. One channel or required train inoperable.	------------------NOTE--------------------- One Loss of Offsite Power channel may be bypassed for up to 4 hours for surveillance testing, provided the other channels are OPERABLE or placed in the trip condition. --	
	F.1 Restore channel or train to OPERABLE status.	72 hours
	OR	
	F.2.1 Be in MODE 3.	78 hours
	AND	
	F.2.2 Be in MODE 4.	84 hours

DCD_16-306
DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
G. One train inoperable.	--------------------NOTE------------------- One train may be bypassed for up to 4 hours for surveillance testing, provided the other train is OPERABLE. --	
	G.1 Restore train to OPERABLE status.	24 hours
	OR	
	G.2.1 Be in MODE 3.	30 hours DCD_16-306
	AND	
	G.2.2 Be in MODE 4.	36 hours DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
O. One S-VDU train inoperable.	--------------------NOTE-------------------- One train may be bypassed for up to 4 hours for surveillance testing, provided the other trains are OPERABLE. ---	
	O.1 Restore train to OPERABLE status.	72 hours
	<u>OR</u>	
	O.2 Enter applicable Conditions and Required Actions for the ESF components made inoperable by the inoperable S-VDU train.	72 hours

DCD_16-306

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
P. One COM-2 train inoperable.	--------------------NOTE-------------------- One train may be bypassed for up to 4 hours for surveillance testing, provided the other trains are OPERABLE. --	
	P.1 Restore train to OPERABLE status.	12 hours
	OR	
	P.2 Enter applicable Conditions and Required Actions for the ESF components made inoperable by the inoperable COM-2 train.	12 hours

DCD_16-306

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
T. Required Action and associated Completion Time for Condition J or S not met.	T.1 Be in MODE 3. <u>AND</u> T.2 Be in MODE 4.	6 hours 12 hours
U. One or more MCR Outside Air Intake Radiation Functions with one channel inoperable.	U.1 Place one MCREFS train and two MCRATCS trains in the emergency mode.	7 days
V. One or more MCR Outside Air Intake Radiation Functions with two channels inoperable.	V.1 Place one MCREFS train and two MCRATCS trains in the emergency mode. <u>AND</u> V.2.1 Restore one channel to OPERABLE status. <u>OR</u> V.2.2 Place two MCREFS trains and three MCRATCS trains in the emergency mode.	Immediately 7 days DCD_16-306 7 days DCD_16-306
W. One or more Functions with one train, A or D, inoperable.	--------------------NOTE------------------- This condition is only applicable to Train A or D. For inoperable Train B or C there is no action required. --- W.1 Place the affected train of MCREFS in the emergency mode.	 7 days

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME	
X. One or more Functions with two trains, A and D, inoperable.	--------------------NOTE------------------- This condition is only applicable to Trains A and D. Other inoperable two-train combinations are addressed in Condition Y. --		
	X.1 Place one MCREFS train in the emergency mode.	Immediately	DCD_16-306
	<u>AND</u>		
	X.2.1 Restore one MCREFS train to OPERABLE status (i.e., one train in the emergency mode and one train OPERABLE).	7 days	
	<u>OR</u>		
	X.2.2 Place two MCREFS trains in the emergency mode.	7 days	DCD_16-306
	<u>AND</u>		
	X.3.1 Restore one affected MCRATCS train to OPERABLE status (i.e., three trains OPERABLE).	7 days	DCD_16-306
	<u>OR</u>		
	X.3.2 Place one affected MCRATCS train in the emergency mode (i.e., one train in the emergency mode and two trains OPERABLE).	7 days	DCD_16-306

Table 3.3.2-1 (page 8 of 11)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS
9. Turbine Trip				
a. Actuation Logic and Actuation Outputs	1,2,3	Trains A and D	G	SR 3.3.2.2 SR 3.3.2.3
b. Reactor Trip, P-4	Refer to Function 11.a (ESFAS Interlocks - Reactor Trip, P-4) for all requirements.			
c. High-High SG Water Level	1,2,3	3 per SG	M,N	SR 3.3.2.1 SR 3.3.2.2 SR 3.3.2.6 SR 3.3.2.7
10. Reactor Coolant Pump Trip				
a. ECCS Actuation	Refer to Function 1 (ECCS Actuation) for all requirements.			
Coincident with Reactor Trip, P-4	Refer to Function 11.a (ESFAS Interlocks - Reactor Trip, P-4) for all requirements.			
11. ESFAS Interlocks				
a. Reactor Trip, P-4	1,2,3	3 trains	BB	SR 3.3.2.8
b. Pressurizer Pressure, P-11	1,2,3	3	I	SR 3.3.2.1 SR 3.3.2.2 SR 3.3.2.6

MIC-04-16-00002

Table 3.3.3-1 (page 1 of 1)
Post Accident Monitoring Instrumentation

	FUNCTION	REQUIRED CHANNELS
1.	Wide Range Neutron Flux	2
2.	Reactor Coolant System (RCS) Hot Leg Temperature (Wide Range)	3
3.	RCS Cold Leg Temperature (Wide Range)	3
4.	RCS Pressure (Wide Range)	2
5.	Reactor Vessel Water Level	2[(d)]
6.	Containment Pressure	2
7.	Containment Isolation Valve Position	2 per penetration flow path[(a)(b)]
8.	Containment High Range Area Radiation	2
9.	Pressurizer Water Level	2
10.	Steam Generator Water Level (Wide Range)	1 per SG
11.	Steam Generator Water Level (Narrow Range)	2 per SG
12.	Core Exit Temperature - Quadrant 1	4[(c)]
13.	Core Exit Temperature - Quadrant 2	4[(c)]
14.	Core Exit Temperature - Quadrant 3	4[(c)]
15.	Core Exit Temperature - Quadrant 4	4[(c)]
16.	Emergency Feedwater Flow	1 per SG
17.	Degrees of Subcooling	2
18.	Main Steam Line Pressure	2 per SG
19.	Emergency Feedwater Pit Level	2
20.	Refueling Water Storage Pit Level (Wide Range)	2
21.	Refueling Water Storage Pit Level (Narrow Range)	2
22.	Charging Flow	2

DCD_07.05-18 S02

(a) Not required for isolation valves whose associated penetration is isolated by at least one closed and deactivated automatic valve, closed manual valve, blind flange, or check valve with flow through the valve secured.

(b) Only one position indication channel is required for penetration flow paths with only one installed control room indication channel.

(c) Two thermocouple channels are required from each of two trains. For each train, one thermocouple channel is required near the center of the core and one thermocouple channel is required near the core perimeter.

(d) A channel consists of three sections with two sensors per section. A channel is OPERABLE if at least one sensor is OPERABLE in all three sections.

SURVEILLANCE REQUIREMENTS

--NOTE--
Refer to Table 3.3.6-1 to determine which SRs apply for each DAS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1	Perform CHANNEL CHECK.	[31 days OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.6.2	Perform COT consistent with Specification 5.5.21, Setpoint Control Program (SCP).	[24 months OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.6.3	-------------------------------NOTE------------------------- The CHANNEL CALIBRATION conducted for the PSMS in LCO 3.3.1 or 3.3.2 may be credited for DAS. -- Perform CHANNEL CALIBRATION consistent with Specification 5.5.21, Setpoint Control Program (SCP).	[24 months OR In accordance with the Surveillance Frequency Control Program]
SR 3.3.6.4	Perform ACTUATION LOGIC TEST.	[24 months OR In accordance with the Surveillance Frequency Control Program]

DCD_16-306

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Loops - MODE 4

LCO 3.4.6 Two RCS loops shall be OPERABLE and one RCS loop shall be in operation.

OR

Three Residual Heat Removal (RHR) loops shall be OPERABLE and two RHR loops shall be in operation and all sources of unborated water shall be isolated.

--NOTES--

1. All reactor coolant pumps (RCPs) and CS/RHR pumps may be removed from operation for ≤ 1 hour per 8 hour period provided:

   a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

   b. Core outlet temperature is maintained at least 10°F below saturation temperature.

2. No RCP shall be started with any RCS cold leg temperature ≤ the Low Temperature Overpressure Protection (LTOP) arming temperature specified in the PTLR unless the secondary side water temperature of each steam generator (SG) is ≤ 50°F above each of the RCS cold leg temperatures.

3. Except as prohibited in Note 1 above, an isolation valve for an unborated water source may be opened when in a planned dilution or makeup activity.

APPLICABILITY: MODE 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required loop inoperable.	A.1 Initiate action to restore ~~a second~~ the required loop to OPERABLE status. AND	Immediately

DCD_16-307

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	A.2 --------------NOTE-------------- Only required if two RHR loops are OPERABLE. ------------------------------------- Be in MODE 5.	24 hours
B. Two or more required loops inoperable. OR Required loop(s) not in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1. AND B.2 Initiate action to restore ~~one~~the required loop(s) to OPERABLE status and operation.	Immediately Immediately
C. ----------NOTES---------- 1. Separate Condition entry is allowed for each unborated water source isolation valve. ~~-----------------------------~~ ~~----------NOTE----------~~ 2. Required Action C.2 must be completed whenever Condition C is entered. ------------------------------ One or more isolation valves for an unborated water source not secured in closed position.	C.1 Initiate actions to secure valve in closed position. AND C.2 Perform SR 3.1.1.1 (SDM verification)	Immediately 4 hours

DCD_16-307

DCD_16-306

DCD_16-306

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. ~~One required RHR loop inoperable.~~Two RHR loops OPERABLE and in Operation. ~~OR~~AND ~~One or more required SGs with secondary side water level not within limit~~One required RHR loop inoperable. ~~AND~~OR ~~Two RHR loops OPERABLE and in Operation.~~One or more required SGs with secondary side water level not within limit	A.1 Initiate action to restore a third RHR loop to OPERABLE status OR A.2 Initiate action to restore required SGs secondary side water level to within limit.	Immediately Immediately
B. Less than two RHR loops OPERABLE or in operation.	B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1. AND B.2 Initiate action to restore two RHR loops to OPERABLE status and operation.	Immediately Immediately

DCD_16-306

DCD_16-306

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. ----------NOTES---------- 1. Separate Condition entry is allowed for each unborated water source isolation valve. ----------------------------- ----------NOTE---------- 2. Required Action C.2 must be completed whenever Condition C is entered. ----------------------------- One or more isolation valves for an unborated water source not secured in closed position.	C.1 Initiate actions to secure valve in closed position. <u>AND</u> C.2 Perform SR 3.1.1.1 (SDM verification)	Immediately 4 hours

DCD_16-306

DCD_16-306

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops - MODE 5, Loops Not Filled

LCO 3.4.8 Three residual heat removal (RHR) loops shall be OPERABLE and two RHR loops shall be in operation, and low-pressure letdown line isolation valve shall be OPERABLE, and all sources of unborated water shall be isolated, with:

a. One OPERABLE safety injection (SI) pump, and

b. Required injection water volume from OPERABLE RWSP ~~and refueling cavity~~. DCD_19-494 S03

---NOTES---

1. ~~One~~All CS/RHR pumps may be removed from operation for ≤ 15 minutes when switching from one loop to another provided: DCD_19-494 S03

   a. The core outlet temperature is maintained > 10°F below saturation temperature,

   b. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and

   c. No draining operations to further reduce the RCS water volume are permitted.

2. One required RHR loop may be inoperable for ≤ 2 hours for surveillance testing, provided that the other two required RHR loops are OPERABLE and in operation. DCD_19-494 S03

3. Except as prohibited in Note 1 above, an isolation valve for an unborated water source may be opened when in a planned dilution or makeup activity.

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required RHR loop inoperable.	A.1 Initiate action to restore a third RHR loop to OPERABLE status.	Immediately

DCD_16-308

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME	
B. One low-pressure letdown isolation valve inoperable.	B.1 Initiate action to restore low-pressure letdown line isolation valve to OPERABLE status.	Immediately	
C. Less than two required RHR loops OPERABLE. OR Less than two ~~R~~required RHR loops in operation.	C.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1. AND C.2 Initiate action to restore two RHR loops to OPERABLE status and operation.	Immediately Immediately	DCD_19-494 S03
D. ----------NOTES---------- 1. Separate Condition entry is allowed for each unborated water source isolation valve. ~~------------------------------~~ ~~----------NOTE----------~~ 2. Required Action D.2 must be completed whenever Condition D is entered. ------------------------------ One or more isolation valves for an unborated water source not secured in closed position.	D.1 Initiate actions to secure valve in closed position. AND D.2 Perform SR 3.1.1.1 (SDM verification)	Immediately 4 hours	DCD_16-306 DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. No SI pump is OPERABLE.	E.1 Initiate action to restore OPERABILITY of SI pump.	Immediately
OR	AND	
RWSP ~~and refueling cavity~~ water volume is not within limits.	E.2 Initiate actions to suspend activities that may cause a reduction in RCS water volume.	Immediately
OR	AND	
RWSP boron concentration is not within limits.	E.3 Initiate actions to restore RWSP ~~and refueling cavity~~ water volume to within limits.	Immediately
	AND	
	E.4 Initiate actions to restore RWSP boron concentration to within limits.	Immediately
F. No RHR loop is in operation.	F.1 Close the equipment hatch and secure with [four] bolts.	~~4 hours~~Prior to the onset of steaming into containment
	AND	
	F.2 Close one door in each air lock.	~~4 hours~~Prior to the onset of steaming into containment
	AND	
	F.3.1 Close each penetration providing direct access from the containment atmosphere to the outside atmosphere with a manual or automatic isolation valve, blind flange, or equivalent.	~~4 hours~~Prior to the onset of steaming into containment
	OR	
	F.3.2 Verify each penetration is capable of being closed by an OPERABLE Containment Purge and Exhaust Isolation System.	~~4 hours~~Prior to the onset of steaming into containment

DCD_19-494 S03
DCD_19-494 S03
DCD_19-494 S03
DCD_19-494 S03
DCD_16-306
DCD_19-494 S03

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.12 Low Temperature Overpressure Protection (LTOP) System

LCO 3.4.12 An LTOP System shall be OPERABLE with a maximum of two Safety Injection (SI) pumps and one charging pump capable of injecting into the RCS and the accumulators isolated and one of the following pressure relief capabilities:

a. Two residual heat removal (RHR) suction relief valves with setpoints specified in the PTLR ~~≥ 456 psig and ≤ 484 psig~~, or DCD_16-308

b. The RCS depressurized and an RCS vent of ≥ 4.7 square inches.

---NOTES---

1. Two charging pumps may be made capable of injecting for ≤ 1 hour for pump swap operations.

2. Accumulator may be unisolated when accumulator pressure is less than the maximum RCS pressure for the existing RCS cold leg temperature allowed by the P/T limit curves provided in the PTLR.

APPLICABILITY: MODE 4 when any RCS cold leg temperature is ≤ LTOP arming temperature specified in the PTLR,
MODE 5,
MODE 6 when the reactor vessel head is on.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.4.12.3	Verify each accumulator is isolated.	[12 hours OR In accordance with the Surveillance Frequency Control Program]
SR 3.4.12.4	Verify RHR suction valve is open for each required RHR suction relief valve.	[12 hours OR In accordance with the Surveillance Frequency Control Program]
SR 3.4.12.5	-------------------------------NOTE-------------------------- Only required to be performed when complying with LCO 3.4.12.b. --- Verify required RCS vent ≥ 4.7 square inches open.	[12 hours for unlocked open vent valve(s) AND 31 days for other vent path(s) OR In accordance with the Surveillance Frequency Control Program]

DCD_16-306

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.16 RCS Specific Activity

LCO 3.4.16 RCS DOSE EQUIVALENT I-131 and DOSE EQUIVALENT XE-133 specific activity shall be within limits.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DOSE EQUIVALENT I-131 not within limit.	--------------------NOTE------------------- LCO 3.0.4.c is applicable. --- A.1 Verify DOSE EQUIVALENT I-131 < 60 µCi/gm. <u>AND</u> A.2 Restore DOSE EQUIVALENT I-131 to within limit.	 Once per 4 hours 48 hours
B. DOSE EQUIVALENT XE-133 not within limit.	--------------------NOTE------------------- LCO 3.0.4.c is applicable. --- B.1 Restore DOSE EQUIVALENT XE-133 to within limit.	 48 hours

DCD_16-306

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS)

3.5.4 Refueling Water Storage Pit (RWSP)

LCO 3.5.4 The RWSP shall be OPERABLE. DCD_16-306

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. RWSP boron concentration not within limits. OR RWSP borated water temperature not within limits.	A.1 Restore RWSP to OPERABLE status. [OR A.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. ------------------------------------ Apply the requirements of Specification 5.5.18.	8 hours 8 hours]
B. RWSP inoperable for reasons other than Condition A.	B.1 Restore RWSP to OPERABLE status.	1 hour
C. Required Action and associated Completion Time not met.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	C.3.2 --------------NOTE-------------- This Required Action is not applicable in MODE 4. ------------------------------------- Apply the requirements of Specification 5.5.18.	24 hours]
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	AND	
	D.2 Be in MODE 5.	36 hours

DCD_16-306

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.2.1	---------------------------NOTES--------------------------- 1. An inoperable air lock door does not invalidate the previous successful performance of the overall air lock leakage test. 2. Results shall be evaluated against acceptance criteria applicable to SR 3.6.1.1. -- Perform required air lock leakage rate testing in accordance with the Containment Leakage Rate Testing Program.	In accordance with the Containment Leakage Rate Testing Program

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.3.6	Perform leakage rate testing for 36 inch high volume purge valves with resilient seals.	[184 days OR In accordance with the Surveillance Frequency Control Program] <u>AND</u> Within 92 days after opening the valve
SR 3.6.3.7	Verify each automatic containment isolation valve that is not locked, sealed or otherwise secured in position, actuates to the isolation position on an actual or simulated actuation signal.	[24 months OR In accordance with the Surveillance Frequency Control Program]

DCD_16-306
DCD_16-306

3.6 CONTAINMENT SYSTEMS

3.6.6 Containment Spray System

LCO 3.6.6 Three containment spray (CS) trains shall be OPERABLE.

---NOTE---
CS train may be considered OPERABLE during alignment and operation for decay heat removal as RHRS if capable of being manually realigned to the CS mode of operation.
-- DCD_16-306

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required containment spray train inoperable.	A.1 Restore three containment spray trains to OPERABLE status. [<u>OR</u> A.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. ----------------------------------- Apply the requirements of Specification 5.5.18	72 hours 72 hours]
B. Required Action and associated Completion Time of Condition A not met.	B.1 Be in MODE 3. <u>AND</u> B.2 Be in MODE 5.	6 hours 36 hours

3.7 PLANT SYSTEMS

3.7.5 Emergency Feedwater System (EFWS)

LCO 3.7.5 Four EFW trains shall be OPERABLE with all EFW pump discharge cross-connect line isolation valves in all trains closed.

APPLICABILITY: MODES 1, 2, and 3. DCD_16-306

ACTIONS

---NOTE---
LCO 3.0.4.b is not applicable when entering MODE 1.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One steam supply to one turbine driven EFW pump inoperable. OR -----------NOTE----------- Only applicable if MODE 2 has not been entered following refueling. ------------------------------ One turbine driven EFW pump inoperable in MODE 3 following refueling.	A.1 Restore affected equipment to OPERABLE status. OR A.2 --------------NOTE-------------- When the EFW pump discharge cross-connect line isolation valves are closed. ------------------------------------ ~~A.2~~ Open all EFW pump discharge cross-connect line isolation valves.	7 days 7 days

DCD_16-306

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One EFW train inoperable in MODE 1, 2, or 3 for reasons other than Condition A.	B.1 Restore EFW train to OPERABLE status. <u>OR</u> <u>B.2</u> --------------NOTE-------------- When the EFW pump discharge cross-connect line isolation valves are closed. ------------------------------------- ~~B.2~~ Open all EFW pump discharge cross-connect line isolation valves.	72 hours DCD_16-306 72 hours DCD_16-306
C. Required Action and associated Completion Time for Condition A or B not met. <u>OR</u> Two EFW trains inoperable in MODE 1, 2, or 3.	C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 4.	6 hours 12 hours
D. Three EFW trains inoperable in MODE 1, 2, or 3.	D.1 --------------NOTE-------------- LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one additional EFW train is restored to OPERABLE status. ------------------------------------- Initiate action to restore one additional EFW train to OPERABLE status.	Immediately

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. [[One or more required UHS transfer pump(s) inoperable.]]	D.1 [[Restore the transfer pump(s) to OPERABLE status.]] [[OR D.2.1 Implement an alternate method of basin transfer.]] [[AND D.2.2 Restore the transfer pump(s) to OPERABLE status]]	[[7 days]] [[7 days]] [[31 days]]
E. Required Action and associated Completion Time of Condition [[A, B, C, or D]] not met. [[OR UHS inoperable for reasons other than Condition A, B, C, or D.]]	E.1 Be in MODE 3. AND E.1 Be in MODE 5.	6 hours 36 hours

DCD_16-306

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.9.1	Verify [[each]] required UHS [[basin]] water inventory is [[≥ 2,850,000 gallons]].	In accordance with the Surveillance Frequency Control Program
SR 3.7.9.2	Verify water temperature of UHS is [[≤ 93°F]].	In accordance with the Surveillance Frequency Control Program

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required MCRVS inoperable during movement of irradiated fuel assemblies. OR Required MCRVS inoperable due to inoperable CRE boundary during movement of irradiated fuel assemblies.	F.1 Suspend movement of irradiated fuel assemblies.	Immediately
G. Required MCRVS inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition C.	G.1 Enter LCO 3.0.3.	Immediately

DCD_16-306

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each MCREFS train for ≥ 10 continuous hours with the heaters operating.	[31 days OR In accordance with the Surveillance Frequency Control Program]
SR 3.7.10.2	Perform required MCREFS filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	A.3.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. ----------------------------------- Apply the requirements of Specification 5.5.18.	72 hours]
B. One required Class 1E GTG inoperable.	B.1 Perform SR 3.8.1.1 for the required offsite circuit(s).	1 hour AND Once per 8 hours thereafter
	AND	
	B.2 Declare required feature(s) supported by the inoperable Class 1E GTGs inoperable when its required redundant feature in a train with an OPERABLE Class 1E GTG is inoperable.	4 hours from discovery of Condition B concurrent with inoperability of redundant required feature(s)
	AND	
	B.3.1 Determine OPERABLE Class 1E GTGs are not inoperable due to common cause failure. OR	24 hours

DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
	B.3.2 Perform SR 3.8.1.2 for OPERABLE Class 1E GTGs.	24 hours
	AND	
	B.4.1 Restore required Class 1E GTGs in three trains to OPERABLE status.	72 hours
	[OR	
	B.4.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. -----------------------------------	
	Apply the requirements of Specification 5.5.18.	72 hours] DCD_16-306
C. Two required offsite circuits inoperable.	C.1 Declare required feature(s) inoperable when its redundant required feature(s) is inoperable.	12 hours from discovery of Condition C concurrent with inoperability of redundant required features
	AND	
	C.2.1 Restore one required offsite circuit to OPERABLE status.	24 hours
	[OR	
	C.2.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. -----------------------------------	
	Apply the requirements of Specification 5.5.18.	24 hours] DCD_16-306

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. One required offsite circuit inoperable.	D.1 Restore required offsite circuit to OPERABLE status.	12 hours
AND	OR	DCD_16-306
One required Class 1E GTG inoperable.	D.2 Restore required Class 1E GTG(s) in three trains to OPERABLE status.	12 hours DCD_16-306
	[OR	
	D.3 -------------NOTE-------------- This Required Action is not applicable in MODE 4. -----------------------------------	
	Apply the requirements of Specification 5.5.18.	12 hours] DCD_16-306
E. Two or more required Class 1E GTGs inoperable.	E.1 Restore two required Class 1E GTGs in two trains to OPERABLE status.	2 hours
F. One required automatic load sequencer(s) inoperable.	F.1 Restore required automatic load sequencer(s) to OPERABLE status.	12 hours
	[OR	
	F.2 -------------NOTE-------------- This Required Action is not applicable in MODE 4. -----------------------------------	
	Apply the requirements of Specification 5.5.18.	12 hours] DCD_16-306

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources - Operating

LCO 3.8.4 DC electrical power subsystems in three trains shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One required battery charger inoperable.	A.1 Restore battery terminal voltages in three trains to greater than or equal to the minimum established float voltage.	2 hours
	AND	
	A.2 Verify battery float current ≤ [5] amps.	Once per 24 hours
	AND	
	A.3.1 Restore battery chargers to OPERABLE status.	7 days
	[OR	DCD_16-306
	A.3.2 --------------NOTE------------- This Required Action is not applicable in MODE 4. ----------------------------------- Apply the requirements of Specification 5.5.18.	7 days] DCD_16-306
B. One required battery inoperable.	B.1 Restore batteries in three trains to OPERABLE status.	2 hours

3.9 REFUELING OPERATIONS

3.9.4 Containment Penetrations

LCO 3.9.4 The containment penetrations shall be in the following status:

a. The equipment hatch is closed and held in place by [four] bolts, or if open, capable of being closed,

b. One door in the emergency air lock is closed and one door in the personnel airlock capable of being closed, and

c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere is either:

1. Closed by a manual or automatic isolation valve, blind flange, or equivalent or DCD_16-306

2. Capable of being closed by an OPERABLE Containment Purge Isolation System. DCD_16-306

---NOTE---
Penetration flow path(s) providing direct access from the containment atmosphere to the outside atmosphere may be unisolated under administrative controls.

APPLICABILITY: During movement of irradiated fuel assemblies within containment.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more containment penetrations not in required status.	A.1 Suspend movement of irradiated fuel assemblies within containment.	Immediately

16.0 TECHNICAL SPECIFICATIONS

16.1 Technical Specifications

16.1.1 Introduction to Technical Specifications

16.1.1.1 Technical Specifications Derivation Criteria

The US-APWR Technical Specifications include the following categories of information as required by 10 CFR 50.36 (Ref. 16.1-1) and 10 CFR 50.36a (Ref. 16.1-2) for operating reactors:

- safety limits
- limiting safety system settings
- LCOs (and associated remedial actions, if any)
- surveillance requirements
- design features
- administrative controls (including requirements on effluents containing radioactive material)

The identification of the structures, systems, components, and parameters for which Limiting Conditions for Operation (LCOs) have been included in the US-APWR Technical Specifications was based on the screening criteria of 10 CFR 50.36(c)(2)(ii) as stated below:

- Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analyses that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- A structure, system or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- A structure~~s~~, system, and component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. MIC-04-16-00006

16.1.1.2 Technical Specification Content

The US-APWR Technical Specifications content meets the 10 CFR 50.36 requirements. NUREG 1431, Rev. 3.1, (Ref. 16.1-3) was selected as the most appropriate guidance for developing the US-APWR Technical Specifications for consistency with the Technical Specification Improvement Program. The US-APWR Technical Specifications differ from NUREG 1431 only as necessary to reflect technical differences between the Westinghouse Owner's Group Standard Technical Specifications design and the US-APWR design.

Chapter 16 Bases Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_09.01.02-53	B3.0 B3.3.2 B3.8.2 B3.8.5 B3.8.8 B3.8.10 B3.9.1 B3.9.2 B3.9.5 B3.9.7	B3.0-4 B3.3.2-54 B3.8.2-1 B3.8.2-3 B3.8.5-1 through B3.8.5-3 B3.8.8-1 through B3.8.8-3 B3.8.10-1 B3.8.10-2 B3.9.1-1 B3.9.1-2 B3.9.2-1 B3.9.2-3 B3.9.5-1 through B3.9.5-4 B3.9.7-1 B3.9.7-2	Response to RAI No. 1055 MHI Letter No. UAP-HF-13273 Date 12/02/2013	Applicability is changed to include when one or more fuel assemblies are seated in the containment racks. In addition to the above, the related portions are changed to be consistent with the applicability change.	-
DCD_16-305	B3.4.8	B3.4.8-5 B3.4.8-9 B3.4.8-	Response to RAI No. 1058 MHI Letter	Revised Action B.1. Revised SR	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	B3.9.6	12 B3.9.6-4 B3.9.6-6 B3.9.6-9	No. UAP-HF-13277 Date 12/04/2013	3.4.8.3. Added SRs 3.4.8.10, 3.4.8.11 and 3.4.8.12. Revised Action B.1. Revised SR 3.9.6.3. Added SRs 3.9.6.9, 3.9.6.10 and 3.9.6.11.	
DCD_19-494 S03	B3.4.8 New B3.6.7 B3.9.6	B3.4.8-1 through B3.4.8-3 B3.4.8-7 B3.4.8-8 B3.4.8-11 B3.4.8-12 B3.6.6-6 B3.9.6-1 through B3.9.6-3 B3.9.6-5 B3.9.6-9	Response to Amended RAI No. 669 MHI Letter No. UAP-HF-13280 Date 12/12/2013	Revised BASES of TS 3.4.8 (RCS Loops – MODE 5, Loops Not Filled) Incorporated BASES of TS 3.6.7 (Containment Penetrations – Shutdown with RCS in Reduced Inventory) Revised BASES of TS 3.9.6 (Residual Heat Removal (RHR) and Coolant Circulation – Low Water Level)	-
DCD_16-306	B 3.4.8 LCO ACTIONS B.1 SURVEILLANCE REQUIREMENTS	B 3.4.8-2 B 3.4.8-5 B 3.4.8-9	Response to RAI No. 1071 MHI Letter No. UAP-HF-14019 Date 2/27/2014	Revised LCO description. Revised Actions B.1. Revised SR 3.4.8.3.	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	SR 3.4.8.3 SURVEILLANCE REQUIREMENTS SR 3.4.8.13 (New) B 3.9.6 LCO ACTIONS B.1 SURVEILLANCE REQUIREMENTS SR 3.9.6.3 SR 3.9.6.12 (New)	 B 3.4.8-12 B 3.9.6-3 B 3.9.6-4 B 3.9.6-9 B 3.9.6-9		Added SR 3.4.8.13. Revised LCO description. Revised Actions B.1. Revised SR 3.9.6.3. Added SR 3.9.6.12.	
MIC-04-16-00010	B 3.2 Title	B 3.2.2-1	Editorial correction	Delete "□"	0
MIC-04-16-00002	B 3.3.1 ACTION	B 3.3.1-37	Editorial	Deleted a space.	0
MIC-04-16-00001	B 3.3.1	B 3.3.1-37 through B 3.3.1-42 B.3.3.1-46 B.3.3.1-47 B.3.3.1-48 B.3.3.1-50 B.3.3.1-	Response to ACRS Subcommittee Questions on April 25-26, 2013 Regarding DCD Chapter 7 MHI Letter No. UAP-HF-13232 Date 09/20/2013	Revised subsections B 3.3.1, B 3.3.2, and B 3.3.5.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
		52 B.3.3.1-54 B.3.3.1-59 B.3.3.1-62 B.3.3.1-69			
	B 3.3.2	B 3.3.2-58 through B 3.3.2-63 B 3.3.2-65 B 3.3.2-66 B 3.3.2-68 B 3.3.2-69 B 3.3.2-71 B 3.3.2-74 B 3.3.2-75 B 3.3.2-76 B 3.3.2-85 B 3.3.2-88 B 3.3.2-95			
	B 3.3.5	B.3.3.5-6 B 3.3.5-11			

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-16-00005	B 3.3.2 APPLICABLE SAFETY ANALYSES, and APPLICABILITY 14. a	B 3.3.2-51	Editorial	Removed the space between OPERABLE and period.	0
DCD_07.05-18 S02	B. 3.3.3 LCO Table B 3.3.4-1 (Sheet 2 of 2)	B 3.3.3-11 B 3.3.4-11	Response to RAI No. 568 amended 02 MHI Letter No. UAP-HF-13223 Date 09/11/2013	Added subsection B3.3.3 LCO No. 22 “Charging Flow”. Revised Table B 3.3.4-1 (Sheet 2 of 2).	0
MIC-04-16-00002	B 3.4.6 APPLICABLE SAFETY ANALYSES	B 3.4.6-2	Editorial	Deleted a period.	0
DCD_16-306	B3.4.6 B3.4.7 B3.4.8 B3.4.14 B3.7.2 B3.7.8	B3.4.6-6 B3.4.7-5 B3.4.8-6 B3.4.14-5 B3.7.2-5 B3.7.8-5	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date 12/26/2013	Correction of format errors.	0
DCD_16-307	B3.4.6	B3.4.6-5 through B3.4.6-7	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date	Clarification of the description.	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
			12/26/2013		
DCD_16-308	B3.4.7 B3.4.8 B3.4.14 B3.5.2 B3.7.5 B3.7.11 B3.8.9	B3.4.7-6 B3.4.8-9 B3.4.14-5 B3.5.2-5 B3.7.5-5 B3.7.11-5 B3.8.9-4	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date 12/26/2013	Correction of editorial errors.	0
DCD_16-308	B 3.9.3 SURVEILLANCE REQUIREMENTS SR 3.9.3.2	B 3.9.3-3	Response to RAI No. 1059 MHI Letter No. UAP-HF-13315 Date 12/26/2013	Deleted “every 24 months”.	0
MIC-04-16-00006	B 3.7.8 BASES APPLICABLE ANALYSES	B 3.7.8-2	Editorial Correction	Delete “RHR”.	0
MIC-04-16-00006	B 3.7.8 BASES APPLICABLE ANALYSES	B 3.7.8-2	Editorial Correction	Replace “CS/RHR” with “RHR”.	0
MIC-04-16-00006	B 3.9.6 LCO	B 3.9.6-3	Editorial Correction	Insert “CS/RHR” between “a” and “heat”.	0
MIC-04-16-	B 3.9.7 APPLICABILITY	B 3.9.7-2	Editorial	Changed “Fuel Storage Pit” to “Spent Fuel Pit”	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
00008			correction		
MIC-04-16-00009	B 3.9.8	B 3.9.8-1	Editorial correction	Changed “Fuel Storage Pit” to “Spent Fuel Pit”	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

B 3.2 POWER DISTRIBUTION LIMITS

MIC-04-16-0 0010

B 3.2.2 Nuclear Enthalpy Rise Hot Channel Factor($F^N_{\Delta H}$)

BASES

BACKGROUND

The purpose of this LCO is to establish limits on the power density at any point in the core so that the fuel design criteria are not exceeded and the accident analysis assumptions remain valid. The design limits on local (pellet) and integrated fuel rod peak power density are expressed in terms of hot channel factors. Control of the core power distribution with respect to these factors ensures that local conditions in the fuel rods and coolant channels do not challenge core integrity at any location during either normal operation or a postulated accident analyzed in the safety analyses.

$F^N_{\Delta H}$ is defined as the ratio of the integral of the linear power along the fuel rod with the highest integrated power to the average integrated fuel rod power. Therefore, $F^N_{\Delta H}$ is a measure of the maximum total power produced in a fuel rod.

$F^N_{\Delta H}$ is sensitive to fuel loading patterns, bank insertion, and fuel burnup. $F^N_{\Delta H}$ typically increases with control bank insertion and typically decreases with fuel burnup.

$F^N_{\Delta H}$ is not directly measurable but is inferred from a power distribution map obtained with the movable incore detector system. Specifically, the results of the three dimensional power distribution map are analyzed by a computer to determine $F^N_{\Delta H}$. This factor is calculated at least every 31 EFPD. However, during power operation, the global power distribution is monitored by LCO 3.2.3, "AXIAL FLUX DIFFERENCE (AFD)," and LCO 3.2.4, "QUADRANT POWER TILT RATIO (QPTR)," which address directly and continuously measured process variables.

The COLR provides peaking factor limits that ensure that the design basis value of the departure from nucleate boiling (DNB) is met for normal operation, operational transients, and any transient condition arising from events of moderate frequency. The DNB design basis precludes DNB and is met by limiting the minimum local DNB heat flux ratio. All DNB limited transient events are assumed to begin with an $F^N_{\Delta H}$ value that satisfies the LCO requirements.

Operation outside the LCO limits may produce unacceptable consequences if a DNB limiting event occurs. The DNB design basis ensures that there is no overheating of the fuel that results in possible cladding perforation with the release of fission products to the reactor coolant.

ACTIONS (continued)

If the Manual Reactor Trip Function cannot be restored to OPERABLE status within the allowed 72 hour Completion Time, the unit must be brought to a MODE in which the requirement does not apply. To achieve this status, the unit must be brought to at least MODE 3 within 6 additional hours (78 hours total time). The 6 additional hours to reach MODE 3 is reasonable, based on operating experience, to reach MODE 3 from full power operation in an orderly manner and without challenging unit systems.

With the unit in MODE 3, ACTION C would apply to any inoperable Manual Reactor Trip Function if the Rod Control System is capable of rod withdrawal or one or more rods are not fully inserted.

The Completion Time of 72 hours is justified because two trains are adequate to perform the safety function~~.~~, and there are three automatic actuation trains and two other Manual Reactor Trip trains OPERABLE. In addition, the Completion Time considers that the Manual Reactor Trip Function, for the inoperable Manual Reactor Trip Function, can be actuated from the Safety VDU for that train. Therefore, the ability to initiate a manual Reactor Trip through safety related equipment remains functional in all three trains. MIC-04-16-00002

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

C.1, C.2.1, and C.2.2

Condition C applies to the Manual Reactor Trip Function in MODE 3, 4, or 5 with the Rod Control System capable of rod withdrawal or one or more rods not fully inserted.

BASES

ACTIONS (continued)

This action addresses the train orientation for this Function. With one required train inoperable, the inoperable train must be restored to OPERABLE status within 72 hours. If the affected Function cannot be restored to OPERABLE status within the allowed 72 hour Completion Time, the unit must be placed in a MODE in which the requirement does not apply. To achieve this status, action must be initiated within the same 72 hours to ensure that all rods are fully inserted, and the Rod Control System must be placed in a condition incapable of rod withdrawal within the next hour. The additional hour provides sufficient time to accomplish the action in an orderly manner. With rods fully inserted and the Rod Control System incapable of rod withdrawal, this Function is no longer required.

The Completion Time of 72 hours is justified because two trains are adequate to perform the safety function, and there are three automatic actuation trains and two other Manual Reactor Trip Functions OPERABLE. In addition, the Completion Time considers that the Manual Reactor Trip Function, for the inoperable Manual Reactor Trip train, can be actuated from the Safety VDU for that train. Therefore, the ability to initiate a manual Reactor Trip through safety related equipment remains functional in all three trains.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

D.1, D.2.1, and D.2.2

Condition D applies to the following Reactor Trip Functions in MODE 3, 4, or 5 with the Rod Control System capable of rod withdrawal or one or more rods not fully inserted:

- RTBs,
- RTB Undervoltage and Shunt Trip Mechanisms, and
- Automatic Trip Logic.

BASES

ACTIONS (continued)

This action addresses the train orientation for these Functions. With one required train inoperable, the inoperable train must be restored to OPERABLE status within 48 hours. If the affected Function(s) cannot be restored to OPERABLE status within the allowed 48 hour Completion Time, the unit must be placed in a MODE in which the requirement does not apply. To achieve this status, action must be initiated within the same 48 hours to ensure that all rods are fully inserted, and the Rod Control System must be placed in a condition incapable of rod withdrawal within the next hour. The additional hour provides sufficient time to accomplish the action in an orderly manner. With rods fully inserted and the Rod Control System incapable of rod withdrawal, these Functions are no longer required.

The Completion Time of 48 hours is justified because the two remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE trains each have continuous automatic self-testing for the Automatic Trip Logic.

The Completion Time of 48 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

E.1.1, E.1.2, E.2.1, E.2.2, and E.3

Condition E applies to the Power Range Neutron Flux (High Setpoint) Function.

With one channel inoperable, the inoperable channel must be placed in the trip condition within 72 hours. This results in a partial trip condition requiring only one-out-of-three logic for actuation of the two-out-of-four trips.

The Completion Time of 72 hours to place the inoperable channel in the trip condition is justified because the three remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the three remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS. In addition, with the remaining three OPERABLE channels, the SSA within the PCMS ensures the control

BASES

ACTIONS (continued)

systems can withstand an input failure to the control system without causing erroneous control system operation, which would otherwise require the protection function actuation.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

In addition to placing the inoperable channel in the trip condition, THERMAL POWER must be reduced to ≤ 75% RTP within 78 hours. Reducing the power level prevents operation of the core with radial power distributions beyond the design limits. With one of the NIS power range detectors inoperable, 1/4 of the radial power distribution monitoring capability is lost.

As an alternative to the above Required Actions, the inoperable channel can be placed in the trip condition within 72 hours and the QPTR monitored once every 12 hours as per SR 3.2.4.2, QPTR verification. Calculating QPTR every 12 hours compensates for the lost monitoring capability due to the inoperable NIS power range channel and allows continued unit operation at power levels < 75% RTP. The 12 hour Surveillance Frequency is consistent with LCO 3.2.4, "QUADRANT POWER TILT RATIO (QPTR)."

As an alternative to the above Required Actions, the plant must be placed in a MODE where this Function is no longer required OPERABLE. Seventy-eight hours are allowed to place the plant in MODE 3. The 78 hour Completion Time includes 72 hours for channel corrective maintenance and an additional 6 hours for the MODE reduction as required by Required Action E.3. This is a reasonable time, based on operating experience, to reach MODE 3 from full power in an orderly manner and without challenging plant systems. If Required Actions cannot be completed within their allowed Completion Times, LCO 3.0.3 must be entered.

The Required Actions are modified by a Note that allows placing one channel in bypass for up to 12 hours while performing surveillance testing, or setpoint adjustments when a setpoint reduction is required by other Technical Specifications, provided the other channels are OPERABLE, or two channels are OPERABLE and one is placed in the trip condition. With one channel bypassed, the system can detect all anomalies, but it cannot also sustain a single failure.

BASES

ACTIONS (continued)

The Bypass Time of 12 hours is justified because the remaining OPERABLE channels are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Bypass Time of 12 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

Required Action E.2.2 has been modified by a Note which only requires SR 3.2.4.2 to be performed if the Power Range Neutron Flux input to QPTR becomes inoperable. Failure of a component in the Power Range Neutron Flux Channel which renders the High Flux Trip Function inoperable may not affect the capability to monitor QPTR. As such, determining QPTR using the movable incore detectors once per 12 hours may not be necessary.

F.1 and F.2

Condition F applies to the following Reactor Trip Functions:

- High Power Range Neutron Flux (Low Setpoint),
- High Power Range Neutron Flux Rate (Positive Rate), and
- High Power Range Neutron Flux Rate (Negative Rate).

BASES

ACTIONS (continued)

With one channel inoperable, the inoperable channel must be placed in the trip condition within 72 hours. Placing the channel in the trip condition results in a partial trip condition requiring only one-out-of-three logic for actuation of the two-out-of-four trips.

The Completion Time of 72 hours to place the inoperable channel in the trip condition is justified because the three remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the three remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

In addition, with the remaining three OPERABLE channels, the SSA within the PCMS ensures the control systems can withstand an input failure to the control system without causing erroneous control system operation, which would otherwise require the protection function actuation.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

If the inoperable channel cannot be placed in the trip condition within the specified Completion Time, the unit must be placed in a MODE where these Functions are not required OPERABLE. An additional 6 hours are allowed to place the unit in MODE 3. Six hours is a reasonable time, based on operating experience, to place the unit in MODE 3 from full power in an orderly manner and without challenging unit systems.

The Required Actions are modified by a Note that allows placing one channel in bypass for up to 12 hours while performing surveillance testing, provided the other channels are OPERABLE, or two channels are OPERABLE and one is placed in the trip condition. With one channel bypassed, the system can detect all anomalies, but it cannot also sustain a single failure.

The Bypass Time of 12 hours is justified because the remaining OPERABLE channels are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Bypass Time of 12 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

BASES

ACTIONS (continued)

The Completion Time of 72 hours to place the inoperable channel in the trip condition is justified because the two remaining OPERABLE channels are adequate to perform the safety function. The Completion Time also considers that the two remaining OPERABLE channels have continuous automatic self-testing.

In addition, the two remaining OPERABLE channels have continuous automatic CHANNEL CHECKS, except for Turbine Trip – Turbine Emergency Trip Oil Pressure. This additional justification is not needed for Turbine Trip – Turbine Emergency Trip Oil Pressure, because this is an anticipatory function that is not credited in the safety analysis.

For all functions (except Turbine Trip – Turbine Emergency Trip Oil Pressure), the Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

The Required Actions are modified by a Note that allows placing one required channel in bypass for up to 12 hours while performing surveillance testing, provided the other required channels are OPERABLE, or one required channel is OPERABLE and the other required channel is placed in the trip condition. With one required channel bypassed, the system can detect all anomalies, but it cannot also sustain a single failure.

BASES

ACTIONS (continued)

The Bypass Time of 12 hours is justified because the remaining OPERABLE channels are adequate to perform the safety function. The Bypass Time also considers that the remaining OPERABLE channels have continuous automatic self-testing.

In addition the remaining OPERABLE channels have continuous automatic CHANNEL CHECKS, except for Turbine Trip – Turbine Emergency Trip Oil Pressure. This additional justification is not needed for Turbine Trip – Turbine Emergency Trip Oil Pressure, because this is an anticipatory function that is not credited in the safety analysis.

The Bypass Time of 12 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-0 0001

M.1 and M.2

Condition M applies to the ECCS Actuation input in MODES 1 and 2. These actions address the train orientation of the RTS for these Functions. With one required train inoperable, 24 hours are allowed to restore the train to OPERABLE status or the unit must be placed in MODE 3 within the next 6 hours.

The Completion Time of 24 hours is justified because the two remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE trains each have continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-0 0001

The Completion Time of 6 hours is reasonable, based on operating experience, to reach MODE 3 from full power in an orderly manner and without challenging unit systems.

The Required Actions have been modified by a Note that allows placing one required train in bypass for up to 4 hours while performing surveillance testing, provided the other required trains are OPERABLE.

BASES

ACTIONS (continued)

The Bypass Time of 4 hours is justified because the remaining OPERABLE trains are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE trains have continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

N.1 [and N.2]

Condition N applies to the RTBs in MODES 1 and 2. These actions address the train orientation of the RTS for the RTBs. With one required train inoperable, 24 hours are allowed for train corrective maintenance to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the two remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE trains each have continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

[Required Action N.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time.]

O.1 and O.2

Condition O applies to the P-6 and P-10 interlocks. With one or more channels inoperable, the associated interlock must be verified to be in its required state for the existing unit condition within 1 hour or the unit must be placed in MODE 3 within the next 6 hours. Verifying the interlock status manually accomplishes the interlock's Function.

The Completion Time of 1 hour is based on operating experience and the minimum amount of time allowed for manual operator actions.

BASES

ACTIONS (continued)

The Completion Time of 48 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

[Required Action Q.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time.]

R.1 [and R.2]

Condition R applies to the RTS Automatic Trip Logic in MODES 1 and 2. These actions address the train orientation of the RTS for these Functions. With one required train inoperable, 24 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the two remaining OPERABLE required trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE required trains each have continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

[Required Action R.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time.]

The Required Actions have been modified by a Note that allows placing one required train in bypass for up to 4 hours while performing surveillance testing, provided the other required trains are OPERABLE.

The Bypass Time of 4 hours is justified because the remaining OPERABLE trains are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE trains have continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

ACTIONS (continued)

U.1 and U.2

Condition U applies to the following Reactor Trip Functions:

- Overtemperature ΔT,
- Overpower ΔT,
- High Pressurizer Pressure, and
- Low SG Water Level.

With one required channel inoperable, the inoperable channel must be placed in the trip condition within 1 hour and restored to OPERABLE status in 72 hours.

This Condition applies to functions that operate on two-out-of-three logic and have channels that are shared with the control systems. Normally the SSA can prevent erroneous control system operations. However, when there are less than three OPERABLE required channels, the SSA cannot prevent erroneous control system operation due to an input failure. With two OPERABLE required channels and one required channel in the trip condition, if a channel failure occurs in an OPERABLE required channel and results in erroneous control system operation, the remaining OPERABLE required channel can provide a plant trip. However, the channel that causes the erroneous control system operation cannot be credited as the single failure; therefore, this configuration does not satisfy the single failure criteria. To satisfy the single failure criteria, three required channels must be restored to OPERABLE status within 72 hours.

The Completion Time of 1 hour to place the failed channel in the trip condition is based on operating experience and the minimum amount of time allowed for manual operator actions.

The Completion Time of 72 hours to restore the inoperable channel is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic channel checks.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref.10). MIC-04-16-00001

ACTIONS (continued)

These Functions do not have to be OPERABLE below the P-7 setpoint because there is insufficient heat production to generate DNB conditions below the P-7 setpoint.

The Completion Time of 1 hour to place the failed channel in the trip condition is based on operating experience and the minimum amount of time allowed for manual operator actions.

The Completion Time of 72 hours to restore the inoperable channel is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref.10). MIC-04-16-00001

Bypass of a required channel is not allowed because there are only three required channels and these channels are also used for control. If a failure were to occur in one of the two remaining required control channels, a plant transient could occur that would require a plant trip, but a plant trip would not occur with only one remaining OPERABLE required channel.

X.1

If the Required Action and associated Completion Time of Condition W is not met, the unit must be placed in which THERMAL POWER is below P-7. Six hours are allowed to reduce THERMAL POWER to below P-7 if the inoperable channel cannot be restored to OPERABLE status or placed in trip within the specified Completion Time.

The Completion Time of 6 hours is reasonable, based on operating experience, to reduce THERMAL POWER to below P-7 from full power in an orderly manner and without challenging unit systems.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.1.4

SR 3.3.1.4 is the performance of a TADOT. This test shall verify RTB train OPERABILITY by actuation of the two RTBs for each train to their trip state. Each RTB may be actuated together or individually.

The RTB train test shall include three separate but overlapping tests: (1) The Undervoltage test for verification of RTB operability using only the Undervoltage Trip Mechanism, (2) The Shunt Trip test for verification of RTB operability using only the Shunt Trip Mechanisms, and (3) The Manual Reactor Trip test for verification of RTB operability using the hardwired switches. The Undervoltage test shall bypass the Shunt Trip Mechanism, so each RTB actuates using only the Undervoltage Trip Mechanism. The Shunt Trip test shall bypass the Undervoltage Trip Mechanism, so each RTB actuates using only the Shunt Trip Mechanism. The Manual Reactor Trip test shall actuate the RTB with both mechanisms. Figure 4.4-1 of MUAP-07004 (Ref. 6) describes an acceptable overlapping method for conducting these three separate tests that confirms OPERABLE status.

[The Surveillance Frequency of every 62 days on a STAGGERED TEST BASIS applies to all four RTB trains. This Surveillance Frequency is justified based on industry experience. The Surveillance Frequency also considers the added reliability of the US-APWR RTB configuration, which includes redundant RTBs within each train and the overall two-out-of-four train configuration. Since each test actuates each RTB to its required trip state, the STAGGERED TEST BASIS results in each RTB being tested every 248 days, and each tripping method being tested every 744 days.

The TADOT STAGGERED TEST BASIS Surveillance Frequency of 62 days, with each RTB tested every 248 days, and each trip method ultimately tested every 744 days, is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

SURVEILLANCE REQUIREMENTS (continued)

The complete OPERABILITY check from the measurement channel input device to the Reactor Trip Breaker is performed by the combination of the continuous automatic self-testing for the digital devices (the RPS and data communication interfaces), the continuous automatic CHANNEL CHECK (SR 3.3.1.1 and SR 3.3.1.7), the CHANNEL CALIBRATION (SR 3.3.1.8, SR 3.3.1.9 and SR 3.3.1.10), the MIC (SR 3.3.1.6) and the TADOT (SR 3.3.1.4 and SR 3.3.1.11). The CHANNEL CALIBRATION, the MIC and the TADOT, which are manual tests, overlap with the continuous automatic self-testing and confirm the functioning of the continuous automatic self-testing.

[The Surveillance Frequency of 24 months is justified because the software memory integrity is checked by the continuous automatic self-testing.

The Surveillance Frequency of 24 months is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 10). MIC-04-16-00001

OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.3.1.7

Performance of the CHANNEL CHECK within 4 hours after reducing power below P-6 and [once every 12 hours thereafter OR in accordance with the Surveillance Frequency Control Program] ensures that gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the

BASES

SURVEILLANCE REQUIREMENTS (continued)

[As appropriate, each channel's response must be verified every 24 months on a STAGGERED TEST BASIS. Testing of the final actuation devices (i.e., RTBs) is included in the testing. Response times cannot be determined during unit operation because equipment operation is required to measure response times. Experience has shown that these components usually pass this SR when performed at the 24 months Surveillance Frequency. Therefore, the Surveillance Frequency was concluded to be acceptable from a reliability standpoint. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.3.1.12 is modified by a Note stating that neutron detectors are excluded from RTS RESPONSE TIME testing. This Note is necessary because of the difficulty in generating an appropriate detector input signal. Excluding the detectors is acceptable because the principles of detector operation ensure a virtually instantaneous response.

REFERENCES

1. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety Related Instrumentation."

2. FSAR Section 7.2.

3. FSAR Chapter 15.

4. IEEE-603-1991.

5. 10 CFR 50.49.

6. MUAP-07004-P, Revision 7, “Safety I&C System Description and Design Process.”

7. MUAP-07005-P, Revision 8, “Safety System Digital Platform -MELTAC-.”

8. 10 CFR 50.36.

9. FSAR Section 6.2.1.

10. FSAR Chapter 19 Appendix B. MIC-04-16-00001

11. MUAP-09021-P, Revision 3, “Response Time of Safety I&C System.”

12. MUAP-09022-P, Revision 3, “US-APWR Instrument Setpoint Methodology.”

13. FSAR Section 7.1

APPLICABLE SAFETY ANALYSES, LCO, and APPLICABILITY (continued)

14. Block Turbine Bypass and Cooldown Valves

The Block Turbine Bypass and Cooldown Valves function prevents the overcooling of the reactor coolant system when T_{avg} is decreased abnormally.

Block turbine bypass and cooldown valves are distributed to Trains A and D.

a. Block Turbine Bypass and Cooldown Valves – Manual Initiation

Manual Initiation of Block Turbine Bypass and Cooldown Valves can be accomplished from the MCR. There are two switches in the MCR, one for each train. Each Turbine Bypass and Cooldown Valve is blocked from both trains. Therefore, either switch can be initiated to immediately block the opening of all Turbine Bypass and Cooldown Valves. This LCO requires 2 Manual Block Turbine Bypass and Cooldown Valves Actuation switches to be OPERABLE in MODES 1, 2 and 3. In MODES 4, 5 and 6, the average coolant temperature is below the Low-Low T_{avg} Signal setpoint and this Function is not required to be OPERABLE-. MIC-04-16-00005

b. Block Turbine Bypass and Cooldown Valves - Actuation Logic and Actuation Outputs

Actuation Logic and Actuation Outputs consist of the same features and operate in the same manner as described for ESFAS Function 1.b. Block Turbine Bypass and Cooldown Valves are distributed to Trains A and D. Both trains must be OPERABLE in MODES 1, 2 and 3. In MODES 4, 5 and 6, the average coolant temperature is below the Low-Low T_{avg} Signal setpoint and this Function is not required to be OPERABLE.

BASES

ACTIONS (continued)

This action addresses the train orientation of the PSMS for the functions listed above. If one required train is inoperable, 72 hours are allowed to return it to an OPERABLE status. Note that for Containment Spray and Phase B Isolation, failure of one or both channels in one train renders the train inoperable. Condition B, therefore, encompasses both situations.

The Completion Time of 72 hours is justified because (1) for ECCS two trains are adequate to perform the safety function and there are three required automatic actuation trains and two other required Manual Initiation trains OPERABLE, (2) for Containment Spray three trains are adequate to perform the safety function and there are four automatic actuation trains and three other Manual Initiation trains OPERABLE, or (3) for Containment Phase A Isolation one train is adequate to perform the safety function and there are two automatic actuation trains and one other Manual Initiation train OPERABLE. The Completion Time also considers that all trains of ECCS can be initiated by the Manual Initiation Function from the two remaining trains, and Containment Spray can be initiated by the Manual Initiation Function from any two of the three remaining trains.

In addition, the Completion Time considers that each train of all Functions can be manually initiated from the Safety VDU for that train. Therefore, manual initiation through safety related equipment remains functional in all required trains.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

If the train cannot be restored to OPERABLE status, the unit must be placed in a MODE in which the LCO does not apply. This is done by placing the unit in at least MODE 3 within an additional 6 hours (78 hours total time) and in MODE 5 within an additional 30 hours (108 hours total time). The allowable Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

BASES

ACTIONS (continued)

C.1, C.2.1, and C.2.2

Condition C applies to the Actuation Logic and Actuation Outputs for the following Functions:

- Containment Phase A Isolation, and
- Containment Phase B Isolation.

This action addresses the train orientation of the PSMS. If one train is inoperable, 24 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the remaining OPERABLE train(s) are adequate to perform the safety function. In addition, the Completion Time considers that the remaining OPERABLE train(s) each have continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

If the train cannot be restored to OPERABLE status, the unit must be placed in a MODE in which the LCO does not apply. This is done by placing the unit in at least MODE 3 within an additional 6 hours (30 hours total time) and in MODE 5 within an additional 30 hours (60 hours total time). The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

The Required Actions are modified by a Note that allows placing one train in bypass for up to 4 hours while performing surveillance testing, provided the other train(s) are OPERABLE. This 4 hour bypass time is reasonable based on operating experience that 4 hours is the average time required to perform a train surveillance.

BASES

ACTIONS (continued)

The Bypass Time of 4 hours is justified because the remaining OPERABLE train(s) are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE train(s) have continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in the FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

D.1, D.2.1, and D.2.2

Condition D applies to:

- High Containment Pressure, and
- High-High Containment Pressure.

If one required channel is inoperable, 72 hours are allowed to restore the channel to OPERABLE status or to place it in the trip condition. Failure of one channel places the Function in a two-out-of-two configuration, when the failed channel does not result in a trip channel. This configuration provides adequate plan protection, but does not meet the single failure criteria. Therefore, within 72 hours the inoperable channel must be tripped to place the Function in a one-out-of-two configuration that satisfies the single failure criteria.

The Completion Time of 72 hours is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

BASES

ACTIONS (continued)

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-0 0001

Failure to restore the channel inoperable to OPERABLE status or place it in the trip condition within 72 hours requires the unit be placed in MODE 3 within the following 6 hours and MODE 4 within the next 6 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. In MODE 4, these Functions are no longer required OPERABLE.

The Required Actions are modified by a Note that allows placing one required channel in bypass for up to 12 hours while performing surveillance testing, provided the other required channels are OPERABLE, or one required channel is OPERABLE and the other required channel is placed in the trip condition.

The Bypass Time of 12 hours is justified because the remaining OPERABLE required channels are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE required channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Bypass Time of 12 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-0 0001

BASES

ACTIONS (continued)

E.1, E.2.1, and E.2.2

Condition E applies to:

- Containment Spray - High-3 Containment Pressure, and
- Containment Phase B Isolation - High-3 Containment Pressure.

If one required channel is inoperable, 72 hours are allowed to restore the channel to OPERABLE status. Failure of one channel places the Function in a two-out-of-two configuration, when the failed channel does not result in a trip channel. This configuration provides adequate plant protection, but does not meet the single failure criteria. Therefore, within 72 hours the inoperable channel must be restored to OPERABLE status. Tripping a channel, as in Condition D, is undesirable because a single failure would then cause spurious Containment Spray initiation. Spurious spray actuation is undesirable because of the cleanup problems presented.

The Completion Time of 72 hours to restore the inoperable channel is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

BASES

ACTIONS (continued)

Failure to restore the required number of channels to OPERABLE status within 72 hours, requires the unit be placed in MODE 3 within the following 6 hours and MODE 4 within the next 6 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. In MODE 4, these Functions are no longer required OPERABLE.

The Required Actions are modified by a Note that allows placing one required channel in bypass for up to 12 hours while performing surveillance testing, provided the other required channels are OPERABLE. Bypassing with another channel in trip, as in Condition D, is undesirable because a single failure during surveillance testing would then cause spurious Containment Spray initiation. Spurious spray actuation is undesirable because of the cleanup problems presented.

Bypass Time of 12 hour is justified because the remaining OPERABLE channels are adequate to perform the safety function. In addition, the remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Bypass Time of 12 hours is also ~~justified~~ supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

F.1, F.2.1, and F.2.2

Condition F applies to Loss of Offsite Power.

ACTIONS (continued)

In addition, the Completion Time for the Manual Initiation Function considers that each train can be manually initiated from the Safety VDU for that train. Therefore, manual initiation through safety related equipment remains functional in all trains.

For all Functions, the Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

If the Function cannot be returned to OPERABLE status, the unit must be placed in MODE 3 within the next 6 hours and MODE 4 within the following 6 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power in an orderly manner and without challenging unit systems. In MODE 4, the unit does not have any analyzed transients or conditions that require the explicit use of the protection functions noted above.

For the Loss of Offsite Power Function a Note is added to allow placing one channel in bypass for up to 4 hours while performing surveillance testing, provided the other channels on the same bus are OPERABLE, or one channel is OPERABLE and the other is placed in the trip condition.

The Bypass Time of 4 hours is justified because the Function remains fully OPERABLE on every bus. In addition, the Bypass Time considers that each OPERABLE train has continuous automatic self-testing.

The 4 hour bypass time is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 5). MIC-04-16-00001

G.1, G.2.1, and G.2.2

Condition G applies to the Actuation Logic and Actuation Outputs for the;

- Emergency Feedwater Isolation,
- CVCS Isolation,
- Turbine Trip Functions, and
- Main Steam Relief Line Isolation

ACTIONS (continued)

The action addresses the train orientation of the PSMS for these Functions. If one train is inoperable, 24 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the remaining OPERABLE train is adequate to perform the safety function. In addition, the Completion Time considers that the remaining OPERABLE train has continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

If the train cannot be returned to OPERABLE status, the unit must be brought to MODE 3 within the next 6 hours and MODE 4 within the following 6 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems. Placing the unit in MODE 4 removes all requirements for OPERABILITY of the protection channels and actuation functions. In this MODE, the unit does not have analyzed transients or conditions that require the explicit use of the protection functions noted above.

The Required Actions are modified by a Note that allows placing one train in bypass for up to 4 hours while performing surveillance testing, provided the other train is OPERABLE.

The Bypass Time of 4 hours is justified because the remaining OPERABLE train is adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE train has continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

BASES

ACTIONS (continued)

J.1 [and J.2]

Condition J applies to the Actuation Logic and Actuation Outputs for the Emergency Feedwater Actuation.

The action addresses the train orientation of the PSMS for this Functions.

If one required train is inoperable, 72 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 72 hours is justified because the two remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE trains each have continuous automatic self-testing.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

[Required Action J.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time.]

The Required Actions are modified by a Note that allows placing one required train in bypass for up to 4 hours while performing surveillance testing, provided the other required trains are OPERABLE.

The Bypass Time of 4 hours is justified because the remaining OPERABLE trains are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE trains have continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

BASES

ACTIONS (continued)

K.1

Condition K applies to the failure of one Containment High Range Area Radiation channel. Since the three Containment High Range Area Radiation channels measure the same parameter, failure of a single channel does not result in loss of the radiation monitoring Function for any event.

If one required channel is inoperable, 72 hours are allowed to restore the channel to OPERABLE status. Failure of one channel places the Function in a two-out-of-two configuration.

The Completion Time of 72 hours to restore the inoperable channel is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B ~~.~~ (Ref. 11). MIC-04-16-00001

BASES

ACTIONS (continued)

With one required channel inoperable the inoperable channel must be placed in the trip condition within 1 hour and restored to OPERABLE status in 72 hours.

This Condition applies to functions that operate on two-out-of-three logic and have channels that are shared with the control systems. Failure of one channel places the Function in a two-out-of-two configuration, when the failed channel does not result in a trip channel. Normally the SSA can prevent erroneous control system operations. However, when there are less than three OPERABLE channels, the SSA cannot prevent erroneous control system operation due to an input failure. With two OPERABLE channels and one channel in the trip condition, if a channel failure occurs in an OPERABLE channel and results in erroneous control system operation, the remaining OPERABLE channel can provide a plant trip. However, the channel that causes the erroneous control system operation cannot be credited as the single failure; therefore, this configuration does not satisfy the single failure criteria. To satisfy the single failure criteria, three channels must be restored to OPERABLE status within 72 hours.

The Completion Time of 1 hour to place the failed channel in the trip condition is based on operating experience and the minimum amount of time allowed for manual operator actions.

The Completion Time of 72 hours to restore the inoperable channel is justified because the two remaining OPERABLE channels are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE channels have continuous automatic self-testing and continuous automatic CHANNEL CHECKS.

The Completion Time of 72 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19~~.~~ Appendix B (Ref.11). MIC-04-16-00001

Bypass of a required channel is not allowed because there are only three required channels and these channels are also used for control. If a failure were to occur in one of the two remaining control channels, a plant transient could occur that would require a plant trip, but a plant transient would not occur with only one remaining OPERABLE channel.

ACTIONS (continued)

If one required train is inoperable, 24 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the remaining OPERABLE trains each have continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

[Required Action Q.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time. This Required Action is not applicable in MODE 4, because Risk Informed Completion Times are only applicable to MODES 1, 2 and 3.]

The Required Actions are modified by a Note that allows placing one required train in bypass for up to 4 hours while performing surveillance testing, provided the other required trains are OPERABLE. This 4 hour Bypass Time is reasonable based on operating experience that 4 hours is the average time required to perform a train surveillance.

The Bypass Time of 4 hours is justified because the remaining OPERABLE trains are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE trains have continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

ACTIONS (continued)

R.1 and R.2

Condition R applies to the Actuation Logic and Actuation Outputs for the following functions:

- ECCS Actuation, and
- Containment Spray,

If the Required Action and associated Completion Time of Condition Q are not met, the unit must be placed in a MODE in which the LCO does not apply. This is done by placing the unit in at least MODE 3 within 6 hours and in MODE 5 within an additional 30 hours (36 hours total time). The Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

S.1 [and S.2]

Condition S applies to the Actuation Logic and Actuation Outputs for the;

- Main Steam Line Isolation,
- Main Feedwater Isolation, and
- Block Turbine Bypass and Cooldown Valves.

The action addresses the train orientation of the PSMS for these Functions.

If one train is inoperable, 24 hours are allowed to restore the train to OPERABLE status.

The Completion Time of 24 hours is justified because the remaining OPERABLE train is adequate to perform the safety function. In addition, the Completion Time considers that the remaining OPERABLE train has continuous automatic self-testing.

The Completion Time of 24 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

BASES

ACTIONS (continued)

[Required Action S.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time.]

The Required Actions are modified by a Note that allows placing one train in bypass for up to 4 hours while performing surveillance testing, provided the other train is OPERABLE.

The Bypass Time of 4 hours is justified because the remaining OPERABLE train is adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE train has continuous automatic self-testing.

The Bypass Time of 4 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

T.1 and T.2

Condition T applies to the Actuation Logic and Actuation Outputs for the following functions:

- Main Steam Line Isolation,
- Main Feedwater Isolation,
- Emergency Feedwater Actuation, and
- Block Turbine Bypass and Cooldown Valves.

Condition T applies when the Required Action and associated Completion Time for Condition J or S have not been met. If the train cannot be returned to OPERABLE status, the unit must be brought to MODE 3 within the next 6 hours and MODE 4 within the following 6 hours (12 hours total time). Placing the unit in MODE 4 removes all requirements for OPERABILITY of the protection channels and actuation functions. In this MODE, the unit does not have analyzed transients or conditions that require the explicit use of the protection functions.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

BASES

ACTIONS (continued)

The Completion Time of 48 hours is justified because the two remaining OPERABLE trains are adequate to perform the safety function. In addition, the Completion Time considers that the two remaining OPERABLE trains each have continuous automatic self-testing.

The Completion Time of 48 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

If the train cannot be restored to OPERABLE status, the unit must be placed in MODE 3 within the next 6 hours and MODE 4 within the following 6 hours. In MODE 4, the unit does not have any analyzed transients or conditions that require the explicit use of the interlock function noted above.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

The SRs for each ESFAS Function are identified by the SRs column of Table 3.3.2-1.

A Note has been added to the SR Table to clarify that Table 3.3.2-1 determines which SRs apply to which ESFAS Functions.

Note that each channel of process protection supplies all trains of the ESFAS. However, when testing a channel, it is only necessary to manually verify that the channel is OPERABLE in its respective division. This is because the interface to other divisions is automatically verified through continuous automatic self-testing. Continuous automatic self-testing is confirmed through periodic MIC. The CHANNEL CALIBRATION is performed in a manner that is consistent with the methods and assumptions of Specification 5.5.21, Setpoint Control Program (SCP).

SR 3.3.2.1

Performance of the CHANNEL CHECK ensures that a gross failure of instrumentation has not occurred. A CHANNEL CHECK is normally a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that instrument channels monitoring the same parameter should read approximately the same value. Significant deviations between instrument channels could be an indication of excessive instrument drift in one of the channels or of something even more serious. A CHANNEL CHECK will detect gross channel failure; thus, it is key to verifying the instrumentation continues to operate properly between each CHANNEL CALIBRATION.

SURVEILLANCE REQUIREMENTS (continued)

The Surveillance Frequency of 24 months is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 11). MIC-04-16-00001

OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.3.2.3

SR 3.3.2.3 is the performance of a TADOT for the Actuation Outputs of all ESFAS Functions, and the Actuation Outputs of the Manual Control of ESF Components Function. This surveillance test actuates the outputs of the SLS.

Therefore, this test is typically conducted in conjunction with testing the plant process components. Since this test is conducted in conjunction with testing for plant process components, this test may be conducted more frequently, as may be required for the plant process components.

[The Surveillance Frequency of 24 months is adequate, based on industry operating experience, considering instrument reliability and operating history data of solid state Actuation Output devices.

OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SURVEILLANCE REQUIREMENTS (continued)

REFERENCES

1. NUREG-0737, "Clarification of TMI Action Plan Requirements."

2. FSAR Section 7.3.

3. FSAR Chapter 15.

4. IEEE-603-1991.

5. 10 CFR 50.49.

6. MUAP-07004-P , Revision 7, "Safety I&C System Description and Design Process."

7. MUAP-07005-P , Revision 8, "Safety System Digital Platform -MELTAC-."

8. MUAP-09021-P, Revision 3, "Response Time of Safety I&C System."

9. 10 CFR 50.36.

10. FSAR Section 15.7.4.

11. FSAR Chapter 19 Appendix B. MIC-04-16-00001

12. MUAP-09022-P, Revision 3, "US-APWR Instrument Setpoint Methodology."

13. Regulatory Guide 1.105, Revision 3, "Setpoints for Safety Related Instrumentation."

14. FSAR Chapter 9.4.1.2.2.

LCO (continued)

20,21. Refueling Water Storage Pit (RWSP) Level (Wide Range, Narrow Range)

RWSP Level is provided for verification and long term surveillance of RCS integrity and is used to determine:

- RWSP level accident diagnosis, and
- Whether to terminate ECCS Actuation, if still in progress.

22. Charging Flow

DCD_07.05-18 S02

Charging Flow is provided to monitor for the failure of a small reactor coolant line outside containment. The failure of one of these small line, such as a break of the sampling line or CVCS letdown line, results in a loss of reactor coolant that may not be and alarm of charging flow is used to detect the small line break and ensure operator isolation of the line after detection of a break.

PAM Display Function

The PAM Display Function is provided by four trains of Safety VDUs (S-VDU). A Safety VDU train consists of a VDU and S-VDU processor. An S-VDU train must be OPERABLE for the corresponding channels of the required PAM Instrumentation Functions, and in the same MODES. For PAM Instrumentation Functions with four channels (two or three required channels), two or three corresponding S-VDU trains must be OPERABLE. For PAM Instrumentation Functions with only two required channels, two corresponding S-VDU trains must be OPERABLE. For CIV position, there are two-train components assigned to Trains A and D, and two-train components assigned to Trains B and C. Therefore, because all four trains are required for CIV position, all four trains of S-VDU are required to be OPERABLE.

APPLICABILITY The PAM Instrumentation LCO is applicable in MODES 1, 2, and 3. These variables are related to the diagnosis and pre-planned actions required to mitigate PAs. The applicable PAs are assumed to occur in MODES 1, 2, and 3. In MODES 4, 5, and 6, unit conditions are such that the likelihood of an event that would require PAM Instrumentation is low; therefore, the PAM Instrumentation is not required to be OPERABLE in these MODES.

Table B 3.3.4-1 (Sheet 2 of 2)
Remote Shutdown Console Instrumentation

FUNCTION	REQUIRED NUMBER OF CHANNELS
6. Main Steam Supply System	
a. Main Steam Line Pressure	2 per Line
7. Component Cooling Water System	
a. CCW Surge Tank Water Level	1 per Required Tank Compartment
b. CCW Header Pressure	1 per Required Pump
c. CCW Header Flow	1 per Required Pump
d. CCW Supply Temperature	1 per Required Pump
e. CCW Pump Discharge Pressure	1 per Required Pump
8. Essential Service Water System	
a. CCW Hx ESW Flow	1 per Required Pump
b. ESW Header Pressure	1 per Required Pump
9. Refueling Water Storage System	
a. RWSP Water Level (Wide Range)	2
10. Nuclear Instrumentation	
a. ~~Source~~Wide Range Neutron Flux	2
[11. UHS Instrumentation	1 per Required Pump]

DCD_07.05-18 S02

BASES

ACTIONS (Continued)

The Completion Time of 6 hours is justified because the two remaining OPERABLE undervoltage devices for each bus are adequate to perform the safety function. Since the undervoltage devices are dedicated for each of the four Class 1E busses, and two undervoltage devices are adequate to perform the safety function of each bus, the LOP Class 1E GTG Start Instrumentation Function continues to meet the single failure criterion (i.e., three GTGs will still actuate if there is an additional undervoltage device failure on one bus).

The Completion Time of 6 hours is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, ~~the summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 5). MIC-04-16-00001

A Note is added to allow placing one channel in bypass for up to 4 hours while performing surveillance testing, provided the other channels on the same bus are OPERABLE, or one channel is OPERABLE and the other is placed in the trip condition.

The Bypass Time of 4 hours is justified because the remaining OPERABLE channels are adequate to perform the safety function. In addition, the Bypass Time considers that the remaining OPERABLE channels have continuous automatic self-testing.

The 4 hour Bypass Time is also ~~justified~~supported by in the US-APWR reliability and risk ~~analyses~~insights, t~~he summary and result of~~ which are documented in FSAR Chapter 19 Appendix B (Ref. 5). MIC-04-16-00001

B.1

Condition B applies when two or more loss of voltage or two or more degraded voltage channels per required Class 1E 6.9 kV bus are inoperable.

Required Action B.1 requires restoring all but one channel per required Class 1E 6.9 kV bus to OPERABLE status. The 1 hour Completion Time should allow ample time to repair most failures and takes into account the low probability of an event requiring an LOP start occurring during this interval.

C.1

Condition C applies when one train of the LOP Actuation Function is inoperable for a required bus, or when the Required Action and associated Completion Time for Condition A or B are not met.

BASES

REFERENCES

1. FSAR Section 8.3.1.

2. MUAP-07004-P, Revision 7, “Safety I&C System Description and Design Process.”

3. MUAP-07005-P, Revision 8, “Safety System Digital Platform -MELTAC-.”

4. 10 CFR 50.36.

5. FSAR Chapter 19 Appendix B. MIC-04-16-00001

6. FSAR Chapter 15.

7. MUAP-09022-P, Revision 3, “US-APWR Instrument Setpoint Methodology.”

BASES

APPLICABLE SAFETY ANALYSES	In MODE 4, RCS circulation is considered in the determination of the time available for mitigation of the accidental boron dilution event. The prevention of an accidental boron dilution event is ensured by requiring that all sources of unborated water be isolated from the RCS when RCS circulation is not provided by at least one operating RCP.~~.~~ MIC-04-16-00002 RCS Loops - MODE 4 satisfies Criterion 4 of 10 CFR 50.36(c)(2)(ii).
LCO	The purpose of this LCO is to require that at least two RCS loops or three RHR loops are OPERABLE in MODE 4 and that one of the RCS loops or two of the RHR loops are in operation. Any one RCS loop or two RHR loops in operation provides enough flow to remove the decay heat from the core with forced circulation. An additional loop is required to be OPERABLE to provide redundancy for heat removal. Additionally, this LCO requires that all sources of unborated water be isolated from the RCS to prevent an inadvertent boron dilution event in MODE 4 with no running RCPs (Reference 1). However, planned dilution and makeup operations are sometimes required during MODE 4 with no RCPs running to compensate for transient conditions which result in a continuous change in the RCS mass (see discussion of Note 3 below). Note 1 permits all RCPs or CS/RHR pumps to be removed from operation for ≤ 1 hour per 8 hour period. The purpose of the Note is to permit tests that are designed to validate various accident analyses values. One of the tests performed during the startup testing program is the validation of rod drop times during cold conditions, both with and without flow. The no flow test may be performed in MODE 3, 4, or 5 and requires that the pumps be stopped for a short period of time. The Note permits the stopping of the pumps in order to perform this test and validate the assumed analysis values. If changes are made to the RCS that would cause a change to the flow characteristics of the RCS, the input values must be revalidated by conducting the test again. The 1 hour time period is adequate to perform the test, and operating experience has shown that boron stratification is not a problem during this short period with no forced flow.

ACTIONS

A.1

If one required loop is inoperable, redundancy for heat removal is lost. Action must be initiated to restore ~~a second~~the required RCS or RHR loop to OPERABLE status. The immediate Completion Time reflects the importance of maintaining the availability of two paths for heat removal. DCD_16-307

A.2

If restoration is not accomplished and two RHR loops are OPERABLE, the unit must be brought to MODE 5 within 24 hours. Bringing the unit to MODE 5 is a conservative action with regard to decay heat removal. With only two RHR loops OPERABLE, redundancy for decay heat removal is lost and, in the event of a loss of the remaining RHR loop, it would be safer to initiate that loss from MODE 5 rather than MODE 4. The Completion Time of 24 hours is a reasonable time, based on operating experience, to reach MODE 5 from MODE 4 in an orderly manner and without challenging plant systems.

This Required Action is modified by a Note which indicates that the unit must be placed in MODE 5 only if two RHR loops are OPERABLE. With no RHR loop OPERABLE, the unit is in a condition with only limited cooldown capabilities. Therefore, the actions are to be concentrated on the restoration of a RHR loop, rather than a cooldown of extended duration.

ACTIONS (continued)

B.1 and B.2

If two or more required loops are inoperable or a required loop(s) are not in operation, except during conditions permitted by Note 1 in the LCO section, all operations involving introduction of coolant into the RCS with boron concentration less than required to meet the minimum SDM of LCO 3.1.1 must be suspended and action to restore ~~one~~the required RCS or RHR loop(s) to OPERABLE status and operation must be initiated. The required margin to criticality must not be reduced in this type of operation. Suspending the introduction of coolant into the RCS of coolant with boron concentration less than required to meet the minimum SDM of LCO 3.1.1 is required to assure continued safe operation. With coolant added without forced circulation, unmixed coolant could be introduced to the core, however coolant added with boron concentration meeting the minimum SDM maintains acceptable margin to subcritical operations. The immediate Completion Times reflect the importance of maintaining operation for decay heat removal. The action to restore must be continued until the required loop(s) are restored to OPERABLE status and operation. DCD_16-307

C.1

ACTION C has two Notes. ~~The first~~ Note 1 allows separate Condition entry for each unborated water source isolation valve. ~~The second~~ Note 2 requires that Required Action C.2 be completed whenever Condition C is entered. DCD_16-306

Preventing inadvertent dilution of the reactor coolant boron concentration when there is insufficient RCS mixing is dependent on maintaining the unborated water isolation valves secured closed when there are no RCPs operating. Securing the valves in the closed position ensures that the valves cannot be inadvertently opened. The Completion Time of immediately requires an operator to initiate actions to close an open valve and secure the isolation valve in the closed position in a timely manner. Once actions are initiated, they must be continued until the valves are secured in the closed position.

ACTIONS (continued)

C.2

Due to the potential of having diluted the boron concentration of the reactor coolant, SR 3.1.1.1 (verification of boron concentration) must be performed whenever Condition C is entered to demonstrate that the required boron concentration exists. The Completion Time of 4 hours is sufficient to obtain and analyze a reactor coolant sample for boron concentration.

SURVEILLANCE REQUIREMENTS

SR 3.4.6.1

This SR requires verification that the required RCS or RHR loop(s) are ~~is~~ in operation. Verification includes flow rate, temperature, or pump status monitoring, which help ensure that forced flow is providing heat removal. In the event that no RCPs are operating to provide sufficient mixing conditions to satisfv the Chapter 15 Safety Analysis assumption the operator is instructed to perform SR 3.4.6.4 to isolate all sources of unborated water to prevent an inadvertent dilution. [The Frequency of 12 hours is sufficient considering other indications and alarms available to the operator in the control room to monitor RCS and RHR loop performance. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-307

SR 3.4.6.2

SR 3.4.6.2 requires verification of SG OPERABILITY. SG OPERABILITY is verified by ensuring that the secondary side narrow range water level is ≥ 14%. If the SG secondary side narrow range water level is < 14%, the tubes may become uncovered and the associated loop may not be capable of providing the heat sink necessary for removal of decay heat. [The 12 hour Frequency is considered adequate in view of other indications available in the control room to alert the operator to the loss of SG level. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

ACTIONS

A.1 and A.2

If two RHR loops are OPERABLE and in operation and either the required SGs have secondary side water levels < 14%, or one required RHR loop is inoperable, redundancy for heat removal is lost. Action must be initiated immediately to restore a third RHR loop to OPERABLE status or to restore the required SG secondary side water levels. Either Required Action will restore redundant heat removal paths. The immediate Completion Time reflects the importance of maintaining the availability of two paths for heat removal.

B.1 and B.2

If less than two RHR loops are in operation, except during conditions permitted by Note 1, or if less than two loops are OPERABLE, all operations involving introduction of coolant into the RCS with boron concentration less than required to meet the minimum SDM of LCO 3.1.1 must be suspended and action to restore two RHR loops to OPERABLE status and operation must be initiated. Suspending the introduction of coolant into the RCS of coolant with boron concentration less than required to meet the minimum SDM of LCO 3.1.1 is required to assure continued safe operation. With coolant added without forced circulation, unmixed coolant could be introduced to the core, however coolant added with boron concentration meeting the minimum SDM maintains acceptable margin to subcritical operations. The immediate Completion Times reflect the importance of maintaining operation for heat removal.

C.1

ACTION C has two Notes. ~~The first~~ Note 1 allows separate Condition entry for each unborated water source isolation valve. ~~The second~~ Note 2 requires that Required Action C.2 be completed whenever Condition C is entered. DCD_16-306

Preventing inadvertent dilution of the reactor coolant boron concentration when there is insufficient RCS mixing is dependent on maintaining the unborated water isolation valves secured closed when there are no RCPs operating. Securing the valves in the closed position ensures that the valves cannot be inadvertently opened. The Completion Time of immediately requires an operator to initiate actions to close an open valve and secure the isolation valve in the closed position in a timely manner. Once actions are initiated, they must be continued until the valves are secured in the closed position.

BASES

ACTIONS (continued)

C.2

Due to the potential of having diluted the boron concentration of the reactor coolant, SR 3.1.1.1 (verification of boron concentration) must be performed whenever Condition C is entered to demonstrate that the required boron concentration exists. The Completion Time of 4 hours is sufficient to obtain and analyze a reactor coolant sample for boron concentration.

SURVEILLANCE REQUIREMENTS

SR 3.4.7.1

This SR requires verification ~~every 12 hours~~ that the required loops are in operation. Verification includes flow rate, temperature, or pump status monitoring, which help ensure that forced flow is providing heat removal. [The Frequency of 12 hours is sufficient considering other indications and alarms available to the operator in the control room to monitor RHR loop performance. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-308

SR 3.4.7.2

Verifying that at least two SGs are OPERABLE by ensuring their secondary side narrow range water levels are ≥ 14% ensures an alternate decay heat removal method via natural circulation in the event that the second RHR loop is not OPERABLE. If two RHR loops are OPERABLE, this Surveillance is not needed. [The 12 hour Frequency is considered adequate in view of other indications available in the control room to alert the operator to the loss of SG level. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

BASES

ACTIONS (continued)

D.1

ACTION D has two Notes. ~~The first~~ Note 1 allows separate Condition entry for each unborated water source isolation valve. ~~The second~~ Note 2 requires that Required Action D.2 be completed whenever Condition D is entered. DCD_16-306

Preventing inadvertent dilution of the reactor coolant boron concentration when there is insufficient RCS mixing is dependent on maintaining the unborated water isolation valves secured closed when there are no RCPs operating. Securing the valves in the closed position ensures that the valves cannot be inadvertently opened. The Completion Time of immediately requires an operator to initiate actions to close an open valve and secure the isolation valve in the closed position in a timely manner. Once actions are initiated, they must be continued until the valves are secured in the closed position.

D.2

Due to the potential of having diluted the boron concentration of the reactor coolant, SR 3.1.1.1 (verification of boron concentration) must be performed whenever Condition C is entered to demonstrate that the required boron concentration exists. The Completion Time of 4 hours is sufficient to obtain and analyze a reactor coolant sample for boron concentration.

BASES

ACTIONS (continued)

The containment equipment hatch, if required to be closed, must be held in place by at least [four] bolts. Good engineering practice dictates that bolts required by this Required Action be approximately equally spaced. DCD_19-494 S03

Containment penetrations, including purge system flow paths, that provide direct access from containment atmosphere to outside atmosphere must be isolated or capable of being isolated. Isolation may be achieved by a single automatic isolation valve, or by a single manual isolation valve, blind flange, or equivalent. Equivalent isolation methods must be approved and may include use of a material that can provide a temporary barrier for the containment penetrations. The equivalent isolation barrier must be capable of maintaining containment closure at the containment design pressure of 68 psig (Ref. 1).

SURVEILLANCE REQUIREMENTS

SR 3.4.8.1

This SR requires verification ~~every 12 hours~~ that the required loops are in operation. Verification includes flow rate, temperature, or pump status monitoring, which help ensure that forced flow is providing heat removal. [The Frequency of 12 hours is sufficient considering other indications and alarms available to the operator in the control room to monitor RHR loop performance. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-308

SR 3.4.8.2

Verification that each required CS/RHR pump is OPERABLE ensures that an additional pump can be placed in operation, if needed, to maintain decay heat removal and reactor coolant circulation. Verification is performed by verifying proper breaker alignment and power available to each required pump. Alternatively, verification that a CS/RHR pump is in operation also verifies proper breaker alignment and power availability. [The Frequency of 7 days is considered reasonable in view of other administrative controls available and has been shown to be acceptable by operating experience. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

This SR is modified by a Note that states the SR is not required to be performed until 24 hours after a required pump is not in operation.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.4.14.1

Performance of leakage testing on each RCS PIV or isolation valve used to satisfy Required Action A.1 and Required Action A.2 is required to verify that leakage is below the specified limit and to identify each leaking valve. The leakage limit of 0.5 gpm per inch of nominal valve diameter up to 5 gpm maximum applies to each valve. Leakage testing requires a stable pressure condition.

For the two PIVs in series, the leakage requirement applies to each valve individually and not to the combined leakage across both valves. If the PIVs are not individually leakage tested, one valve may have failed completely and not be detected if the other valve in series meets the leakage requirement. In this situation, the protection provided by redundant valves would be lost.

Testing is to be performed ~~every 24 months~~per the surveillance frequency, but may be extended if the plant does not go into MODE 5 for at least 7 days. [The 24 month Frequency is consistent with 10 CFR 50.55a(g) (Ref. 8) as contained in the Inservice Testing Program, is within frequency allowed by the American Society of Mechanical Engineers (ASME) Code (Ref. 7), and is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle length. This equipment is not at risk of imminent damage as it is designed to remain functional and in good condition while in operation, thus significant degradation due to a longer surveillance interval should not be of major concern. The design reliability is, therefore, maintained by taking these considerations based on sound engineering judgment. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-308 DCD_16-306

Testing must also be performed once, to ensure tight reseating after an RCS PIV has been actuated. PIVs disturbed in the performance of this Surveillance should also be tested unless documentation shows that an infinite testing loop cannot practically be avoided. Testing must be performed within 24 hours after the valve has been reseated. Within 24 hours is a reasonable and practical time limit for performing this test after opening or reseating a valve.

The leakage limit is to be met at the RCS pressure associated with MODES 1 and 2. This permits leakage testing at high differential pressures with stable conditions not possible in the MODES with lower pressures.

LCO

In MODES 1, 2, and 3, three independent (and redundant) SIS trains are required to ensure that sufficient SIS flow is available, assuming a single failure affecting one of the three required trains. Additionally, individual components within the SIS trains may be called upon to mitigate the consequences of other transients and accidents.

In MODES 1, 2, and 3, an SIS train consists of the piping, instruments, and controls to ensure an OPERABLE flow path capable of taking suction from the RWSP upon an ECCS actuation signal.

During an event requiring ECCS actuation, a flow path is required to provide an abundant supply of water from the RWSP to the RCS via the SI pumps and their respective supply headers to each of the four direct vessel injection nozzles. In the long term, this flow path may be switched to supply its flow between the RCS hot and cold legs. Management of gas voids is important to ECCS OPERABILITY. DCD_16-308

The flow path for each train must maintain its designed independence to ensure that no single failure can disable the capability of two or more SIS trains.

As indicated in Note 1, the SIS flow paths may be isolated for 2 hours in MODE 3, under controlled conditions, to perform pressure isolation valve testing per SR 3.4.14.1. The flow path is readily restorable from the control room.

As indicated in Note 2, operation in MODE 3 with SIS trains made incapable of injecting in order to facilitate entry into or exit from the Applicability of LCO 3.4.12, "Low Temperature Overpressure Protection (LTOP) System," is necessary for plants with an LTOP arming temperature at or near the MODE 3 boundary temperature of 350°F. LCO 3.4.12 requires that certain pumps be rendered incapable of injecting at and below the LTOP arming temperature. When this temperature is at or near the MODE 3 boundary temperature, time is needed to make pumps incapable of injecting prior to entering the LTOP Applicability, and provide time to restore the inoperable pumps to OPERABLE status on exiting the LTOP Applicability.

BASES

ACTIONS (continued)

D.1 and D.2

If the MSIVs cannot be restored to OPERABLE status or are not closed within the associated Completion Time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.2.1

This SR verifies that MSIV closure time is ≤ 5 seconds. The MSIV isolation time is assumed in the accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not tested at power, they are exempt from the ASME Code (Ref. 5), requirements during operation in MODE 1 or 2.

The Frequency is in accordance with the Inservice Testing Program.

This test is conducted in MODE 3 with the unit at operating temperature and pressure. This SR is modified by a Note that allows entry into and operation in MODE 3 prior to performing the SR. This allows a delay of testing until MODE 3, to establish conditions consistent with those under which the acceptance criterion was generated.

SR 3.7.2.2

This SR verifies that each MSIV can close on an actual or simulated actuation signal. This Surveillance is normally performed upon returning the plant to operation following a refueling outage. [The Frequency of MSIV testing is every 24 months. The 24 month Frequency for testing is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle length. This equipment is not at risk of imminent damage as it is designed to remain functional and in good condition while in operation, thus significant degradation due to a longer surveillance interval should not be of major concern. The design reliability is, therefore, maintained by taking these considerations based on sound engineering judgment. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-306

ACTIONS (continued)

c. For both the inoperability of a steam supply line to the turbine driven pump and an inoperable turbine driven EFW pump while in MODE 3 immediately following a refueling outage, the 7 day Completion Time is reasonable due to the availability of redundant OPERABLE motor driven EFW pumps, and due to the low probability of an event requiring the use of the turbine driven EFW pump.

Condition A is modified by a Note which limits the applicability of the Condition to when the unit has not entered MODE 2 following a refueling. Condition A allows one EFW train to be inoperable for 7 days vice the 72 hour Completion Time in Condition B. This longer Completion Time is based on the reduced decay heat following refueling and prior to the reactor being critical.

B.1

With one of the required EFW trains (pump or flow path) inoperable in MODE 1, 2, or 3 for reasons other than Condition A, action must be taken to restore to OPERABLE status within 72 hours or open all EFW pump discharge cross-connect line isolation valves within 72 hours . This Condition includes the loss of two steam supply lines to the turbine driven EFW pump. The 72 hour Completion Time is reasonable, based on redundant capabilities afforded by the EFWS, time needed for repairs, and the low probability of a DBA occurring during this time period.

C.1 and C.2

When Required Action A.1 or B.1 cannot be completed within the required Completion Time, or if two required EFW trains are inoperable in MODE 1, 2, or 3, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 4 within 12 hours.

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

In MODE 4 with two required EFW trains inoperable, operation is allowed to continue because only one or two motor driven pump EFW trains is required ~~in accordance with the Note that modifies the LCO~~. Although not required, the unit may continue to cool down and initiate RHR. DCD_16-308

APPLICABLE SAFETY ANALYSES

The design basis of the ESWS is for two ESWS trains, in conjunction with the CCW System to remove core decay heat following a design basis LOCA. This prevents the refueling water storage pit fluid from increasing in temperature following a LOCA and provides for a gradual reduction in the temperature of this fluid as it is supplied to the Reactor Coolant System. The ESWS is designed to perform its function with a single failure of any active component, assuming the loss of offsite power.

The ESWS, in conjunction with the CCW System, also cools the unit from ~~RHR~~ residual heat removal (RHR), as discussed in Chapter 5, (Ref. 2) entry conditions to MODE 5 during normal and post accident operations. The time required for this evolution is a function of the number of CCW and ~~CS/~~RHR System trains that are operating. MIC-04-16-00006 MIC-04-16-00006

Two ESWS trains are sufficient to remove decay heat during subsequent operations in MODES 5 and 6. This assumes a maximum ESWS temperature of 95°F occurring simultaneously with maximum heat loads on the system.

The ESWS satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii).

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.8.2

This SR verifies proper automatic operation of the ESWS valves on an actual or simulated actuation signal. The ESWS is a normally operating system that cannot be fully actuated as part of normal testing. This surveillance is tested to assure the requirements of IST program described in Table 3.9-14. The motor operated valve is provided at the discharge of each pump. The starting logic of the ESWP interlocks the motor operated valve with the pump operation. This interlock prevents the pump from starting if the valve is not closed. The closed discharge valve opens after starting the ESWP. This Surveillance is not required for valves that are locked, sealed, or otherwise secured in the required position under administrative controls. [The 24 month Frequency is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle length. This equipment is not at risk of imminent damage as it is designed to remain functional and in good condition while in operation, thus significant degradation due to a longer surveillance interval should not be of major concern. The design reliability is, therefore, maintained by taking these considerations based on sound engineering judgment. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.7.8.3

This SR verifies proper automatic operation of the ESWS pumps on an actual or simulated actuation signal. The ESWS is a normally operating system that cannot be fully actuated as part of normal testing during normal operation. [The 24 month Frequency is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle length. This equipment is not at risk of imminent damage as it is designed to remain functional and in good condition while in operation, thus significant degradation due to a longer surveillance interval should not be of major concern. The design reliability is, therefore, maintained by taking these considerations based on sound engineering judgment. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.] DCD_16-306

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.11.2

This SR verifies that the required annulus emergency exhaust system testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The VFTP includes testing the performance of the HEPA filter, and minimum flow rate. Specific test frequencies and additional information are discussed in detail in the VFTP.

SR 3.7.11.3

This SR verifies that the annulus emergency exhaust system starts and operates on an actual or simulated actuation signal. [The 24 month Frequency is based on engineering judgment, taking into consideration the unit conditions required to perform the Surveillance, and is intended to be consistent with expected fuel cycle length. This equipment is not at risk of imminent significant degradation due to a longer surveillance interval should not be of major concern. The design reliability is, therefore, maintained by taking these considerations based on sound engineering judgment. OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.7.11.4

The Annulus Emergency Exhaust System produces a negative pressure to prevent leakage from the penetration and safeguard component areas. This SR verifies that the penetration and safeguard component areas can be rapidly drawn down to at a ≤-0.25 inches water gauge relative to ~~atmospheric pressure~~surrounding areas. This SR verifies the integrity of the penetration and safeguard component areas enclosure. The ability of the penetration and safeguard component areas to draw down and maintain a negative pressure, with respect to potentially uncontaminated adjacent areas, is periodically tested to verify proper function of annulus emergency exhaust system. During the accident condition, Each annulus emergency exhaust system train is designed to draw down to at a ≤-0.25 inches water gauge relative to ~~atmospheric pressure~~surrounding areas within 240 seconds after a start signal and maintain a ≤-0.25 inches water gauge relative to ~~atmospheric pressure~~surrounding areas at a flow rate of 5600 cfm in the associated room, with respect to adjacent areas, to prevent unfiltered LEAKAGE. [The Frequency of 24 months is also consistent with the guidance provided in NUREG-0800 (Ref. 6). OR The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

DCD_16-308

DCD_16-308

DCD_16-308

BASES

LCO (continued)

This LCO is modified by Notes. Note 1 specifies that A MOV 480V MCC 1 and A MOV 480V MCC 2 must be OPERABLE to support operability of 480V MOV MCC A; D MOV 480V MCC 1 and D 480V MOV MCC 2 must be OPERABLE to support operability of 480V MOV MCC D. Note 2 permits the two train buses to be removed from operation when switching from one train to another. The circumstances for de-energizing two train buses are to be limited to situations when the outage time is short. DCD_16-308

APPLICABILITY

The electrical power distribution subsystems are required to be OPERABLE in MODES 1, 2, 3, and 4 to ensure that:

a. Acceptable fuel design limits and reactor coolant pressure boundary limits are not exceeded as a result of AOOs or abnormal transients and

b. Adequate core cooling is provided, and containment OPERABILITY and other vital functions are maintained in the event of PA.

Electrical power distribution subsystem requirements for MODES 5 and 6 are covered in the Bases for LCO 3.8.10, "Distribution Systems - Shutdown."

ACTIONS

A.1 [and A.2]

With one Train A, B, C or D required ac bus, load center, or motor control center inoperable and a loss of function has not occurred, the remaining ac electrical power distribution subsystems are capable of supporting the minimum safety functions necessary to shut down the reactor and maintain it in a safe shutdown condition, assuming no single failure. The overall reliability is reduced, however, because a single failure in the remaining power distribution subsystems could result in the minimum required ESF functions not being supported. Therefore, the required ac buses, load centers, and motor control centers must be restored to OPERABLE status within 8 hours. [Required Action A.2 allows the option to apply the requirements of Specification 5.5.18 to determine a Risk Informed Completion Time (RICT). This Requied Action is not applicable in MODE 4.]

Condition A worst scenario is one required train without ac power (i.e., no offsite power to the train and the associated GTGs inoperable). In this Condition, the unit is more vulnerable to a complete loss of ac power. It is, therefore, imperative that the unit operator's attention be focused on minimizing the potential for loss of power to the remaining train by stabilizing the unit, and on restoring power to the affected train. The 8 hour time limit before requiring a unit shutdown in this Condition is acceptable because of:

BASES

ACTIONS (continued)

C.1

With no audible alarm and count rate OPERABLE, prompt and definite indication of a boron dilution event, consistent with the assumptions of the safety analysis, is lost. In this situation, the boron dilution event may not be detected quickly enough to assure sufficient time is available for operators to manually isolate the unborated water source and stop the dilution prior to the loss of SHUTDOWN MARGIN. Therefore, action must be taken to prevent an inadvertent boron dilution event from occurring. This is accomplished by isolating all the unborated water flow paths to the Reactor Coolant System. Isolating these flow paths ensures that an inadvertent dilution of the reactor coolant boron concentration is prevented. The Completion Time of "Immediately" assures a prompt response by operations and requires an operator to initiate actions to isolate an affected flow path immediately. Once actions are initiated, they must be continued until all the necessary flow paths are isolated or the circuit is restored to OPERABLE status.

SURVEILLANCE REQUIREMENTS

SR 3.9.3.1

SR 3.9.3.1 is the performance of a CHANNEL CHECK, which is a comparison of the parameter indicated on one channel to a similar parameter on other channels. It is based on the assumption that the two indication channels should be consistent with core conditions. Changes in fuel loading and core geometry can result in significant differences between source range channels, but each channel should be consistent with its local conditions.

[The Frequency of 12 hours is consistent with the CHANNEL CHECK Frequency specified similarly for the same instruments in LCO 3.3.1,“Reactor Trip System (RTS) Instrumentation”. OR the Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program.]

SR 3.9.3.2

SR 3.9.3.2 is the performance of a CHANNEL CALIBRATION ~~every 24 months~~. This SR is modified by a Note stating that neutron detectors are excluded from the CHANNEL CALIBRATION. The CHANNEL CALIBRATION for the source range neutron flux monitors consists of obtaining the detector plateau or preamp discriminator curves, evaluating those curves, and comparing the curves to the manufacturer's data. The CHANNEL CALIBRATION also includes verification of the audible alarm and count rate function. [The ~~[~~24 month Frequency is based on the need to perform this Surveillance under the conditions that apply during a plant outage. DCD_16-308

DCD_16-308

BASES

LCO (continued)

(and at near atmospheric pressure) and have electrical power are the criteria necessary to be OPERABLE in Mode 6. No pump automatic start features are required to be OPERABLE in Mode 6 as these capabilities were not credited in the PRA.

This LCO is modified by two Notes. Note 1 permits the CS/RHR pumps to be removed from operation for ≤ 15 minutes when switching from one train to another. The circumstances for stopping all CS/RHR pumps are to be limited to situations when the outage time is short and the core outlet temperature is maintained > 10° ~~derees~~ F below saturation temperature. The Note prohibits boron dilution or draining operations when RHR forced flow is stopped. DCD_19-494 S03

Note 2 allows one RHR loop to be inoperable for a period of ≤ 2 hours provided the other two required loops are OPERABLE and in operation. Prior to declaring the loop inoperable, consideration should be given to the existing plant configuration. This consideration should include that the core time to boil is short, there is no draining operation to further reduce RCS water level and that the capability exists to inject borated water into the reactor vessel. This permits surveillance tests to be performed on the inoperable loop during a time when these tests are safe and possible. DCD_19-494 S03

An OPERABLE RHR loop consists of a CS/RHR pump, a CS/RHR heat exchanger, valves, piping, instruments and controls to ensure an OPERABLE flow path and to determine the low end temperature. The flow path starts in one of the RCS hot legs and is returned to the RCS cold legs. Management of gas voids is important to RHR System OPERABILITY. MIC-04-16-00006

All CS/RHR pumps may be aligned to the Refueling Water Storage Pit to support filling or draining the refueling cavity or for performance of required testing.

APPLICABILITY

Three RHR loops are required to be OPERABLE, and two RHR loops must be in operation in MODE 6, with the water level < 23 ft above the top of the reactor vessel flange, to provide decay heat removal and mixing of the borated coolant. Requirements for the RHR System in other MODES are covered by LCOs in Section 3.4, Reactor Coolant System (RCS), and Section 3.5, Emergency Core Cooling Systems (ECCS). RHR loop requirements in MODE 6 with the water level ≥ 23 ft are located in LCO 3.9.5, "Residual Heat Removal (RHR) and Coolant Circulation - High Water Level."

In MODE 6 Low Water Level, low-pressure letdown line isolation valves are automatically closed upon detection of RCS loop low-level signal to prevent loss of RCS inventory.

The function is effective to prevent core damage during plant shutdown, based on probabilistic risk assessment.

BASES

APPLICABILITY

LCO 3.9.7 is applicable when moving irradiated fuel assemblies within containment and when one or more irradiated fuel assemblies are seated in the containment racks. The LCO minimizes the possibility of a fuel handling accident in containment that is beyond the assumptions of the safety analysis. If irradiated fuel assemblies are not being moved in containment, there can be no significant radioactivity release as a result of a postulated fuel handling accident. Requirements for fuel handling accidents in the spent fuel pit are covered by LCO 3.7.12, "Spent Fuel ~~Storage~~ Pit Water Level." DCD_09.01.02-53 MIC-04-16-00008

When one or more irradiated fuel assembles are seated in the containment racks, maintaining the specified water level in the refueling cavity provides shielding, minimizes the general area dose and provides an adequate available heat sink. DCD_09.01.02-53

ACTIONS

A.1

With a water level of < 23 ft above the top of the reactor vessel flange, all operations involving or movement of irradiated fuel assemblies within the containment shall be suspended immediately to ensure that a fuel handling accident cannot occur.

The suspension of fuel movement shall not preclude completion of movement of a component to a safe position.

A.2 DCD_09.01.02-53

With a water level of < 23 ft above the top of the reactor vessel flange, actions shall be initiated immediately to restore refueling cavity water level to within limits to provide adequate shielding and an adequate available heat sink.

B 3.9 REFUELING OPERATIONS

B 3.9.8 Decay Time

BASES

BACKGROUND

The movement of irradiated fuel assemblies within containment or in the fuel handling area requires allowing at least 24 hours for radioactive decay time before fuel assembly handling can be initiated. During fuel handling, this ensures that sufficient radioactive decay has occurred in the event of a fuel handing accident (Refs. 1 and 2). Sufficient radioactive decay of short-lived fission products would have occurred to limit offsite doses from the accident to within the values reported in Chapter 15.

APPLICABLE SAFETY ANALYSES

During movement of irradiated fuel assemblies, the radioactivity decay time is an initial condition design parameter in the analysis of a fuel handling accident inside containment or in the fuel handling area, as postulated by Regulatory Guide 1.183 (Ref. 1).

The fuel handling accident analysis inside containment or in the fuel handling area is described in Reference 2. This analysis assumes a minimum radioactive decay time of 24 hours.

Radioactive decay time satisfies Criterion 2 of 10 CFR 50.36(c)(2)(ii).

LCO

A minimum radioactive decay time of 24 hours is required to ensure that the radiological consequences of a postulated fuel handling accident inside containment or in the fuel handling area are within the values calculated in Reference 2.

APPLICABILITY

Radioactive decay time is applicable when moving irradiated fuel assemblies in containment or in the fuel handling area. The LCO minimizes the possibility of radioactive release due to a fuel handling accident that is beyond the assumptions of the safety analysis. If irradiated fuel assemblies are not being moved, there can be no significant radioactivity release as a result of a postulated fuel handling accident.

Requirements for fuel handling accidents inside containment or in the fuel handling area are also covered by LCO 3.7.12, "Spent Fuel ~~Storage~~ Pit Water Level" and LCO 3.9.7, "Refueling Cavity Water Level". MIC-04-16-00009

ACTIONS

A.1

With a decay time of less than 24 hours, all operations involving movement of irradiated fuel assemblies within containment or in the fuel

Chapter 16 COL Information Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Tier 2

Chapter 17

Chapter 17 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-17-00002	ACRONYMS AND ABBREVIATIONS 17.3 17.4.4 17.4.10 17.5 17.5.2	17-2 17-3 17.3-1 17.4-2 17.4-3 17.4-61 17.5-1 17.5-2	MHI Letter No. UAP-HF-14012 Date 02/20/2014	Revised revision number/date of Quality Assurance Program (QAP) Description, PQD-HD-19005. Revised acronyms and organization titles consistent with PQD-HD-19005 changes.	-

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

Tier 2

Chapter 18

Chapter 18 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-18-00004	18.1.7 18.10.5	18.1-15 18.10-6	MHI Letter No. UAP-HF-14012 Date 02/20/2014	Revised revision number/date of Quality Assurance Program (QAP) Description, PQD-HD-19005	-

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is "-", the change was not made in a T/R.

Tier 2

Chapter 19

Chapter 19 Change List

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
DCD_19-592	Table 19.1-119 (Sheet 34 of 46)	19.1-931	Response to RAI No. 1033 MHI Letter No. UAP-HF-13177 Date 07/12/2013	Clarified the need for refueling cavity level instrumentation when cavity is flooded up.	-
DCD_19-575_S01	19.1.2.3 Table 19.1-182 (New)	19.1-5 19.1-1173	Amended Response to RAI No. 967 MHI Letter No. UAP-HF-13269 Date 11/12/2013	Revised the description regarding review of PRA technical adequacy and added Table 19.1-182.	-
DCD_19-516 S01	19.1.9 Table 19.1-119 (Sheet 1, 5, 11, 16, 18 of 50) Table 19.1-180	19.1-197 19.1-908 19.1-912 19.1-918 19.1-923 19.1-925 19.1-1166	Response to RAI No. 750 amended MHI Letter No. UAP-HF-13274 Date 11/25/2013	Added details of the room heat-up analyses that support the PRA results (Table 19.1-180). This includes update of references (Sub-section 19.1.9) and PRA insights (Table 19.1-119).	-
DCD_19-513 S01	Table 19.1-15 (Sheets 6, 7, 9, 10, 14of	19.1-247,	Response to Amended RAI No. 750	Revised this table by incorporating new	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	14) Table 19.1-16 (Sheets 1 through 25 of 26)	19.1-248, 19.1-250, 19.1-251, 19.1-255	MHI Letter No. UAP-HF-13297 Date 12/12/2013	thermal/hydraulic analysis results.	
DCD_19-514 S01	Table 19.1-119 (Sheet 25 of 51)	19.1-932	Response to Amended RAI No. 750 MHI Letter No. UAP-HF-13297 Date 12/12/2013	Revised Item 37 of "Operator actions (At Power)"	-
DCD_19-529 S01	19.2.4.1 19.2.7	19.2-30 19.2-32 19.2-51	Response to RAI No. 764 amended S01 MHI Letter No. UAP-HF-13276 Date 12/2/2013	Revised the description to refer to MUAP-10018. Updated the revision number and date of MUAP-10018.	-
DCD_19-578 S01	Table 19.1-119 (Sheet 33 and 37 of 50)	19.1-940 19.1-944	Response to RAI No. 983 MHI Letter No. UAP-HF-13299 Date 12/09/2013	Revised descriptions in Item 12 of "LPSD assumptions" and Item 7 of "Expeditious actions outlined in GL 88-17".	-
DCD_19-494 S03	Table 19.1-119 (Sheets 34through 37	19.1-941 through	Response to Amended RAI No. 669	Revised the following portions: 1. Description in	-

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
	of 50	19.1-944	MHI Letter No. UAP-HF-13280 Date 12/12/2013	Item 12 of "LPSD assumptions" 2. Disposition in Items 23 and 24 of "LPSD assumptions" 3. Description and Disposition in Item 2 of "Expeditious actions outlined in GL 88-17" 4. Disposition in Item 6 of "Expeditious actions outlined in GL 88-17". 5. Description and Disposition in Item 8 of "Expeditious actions outlined in GL 88-17"	
DCD_19-594 DCD_19-595	19.1.6.1 Table 19.1-119 (sheet 35 of 51)	19.1-136 19.1-942	Response to RAI No. 1061 MHI Letter No. UAP-HF-13305 Date 12/12/2013	Revised description of CVCS (Chemical and volume control system) in Subsection 19.1.6.1. Added Items 25, 26 and 27 of "LPSD assumptions" in Table 19.1-119.	-
DCD_19-593	19.3.3 COL 19.3(4)	19.3-1	Response to RAI No. 1049 MHI Letter No. UAP-HF-13242 Date 09/26/2013	Added statement "(including consideration of severe accident mitigation alternatives)"	0

Change ID No.	Location (e.g., subsection, table, or figure)	DCD Rev.4 Page *	Reason for Change	Change Summary	Rev. of T/R**
MIC-04-19-00001	19A.4.4	19A-4	Typo	Deleted extra “s”.	0

*Page numbers for the attached marked-up pages may differ from the revision 4 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

**Numerical number is the revision number of the Tracking Report (T/R) which include the markup pages. When the column is “-“, the change was not made in a T/R.

19.3 Open, Confirmatory, and COL Action Items Identified as Unresolved

The following subsections identify the open, confirmatory and COL action items associated with this Chapter.

19.3.1 Resolution of Open Items

There are no open items associated with this Chapter.

19.3.2 Resolution of Confirmatory Items

There are no confirmatory items associated with this Chapter.

19.3.3 Resolution of COL Action Items

The following are the COL action items associated with this Chapter:

COL 19.3(1) The COL Applicant who intends to implement risk-informed applications will update and upgrade the information in the design-specific PRA to incorporate site-specific, as-built and as-operated information per 10 CFR 50.71(h)(1) for its intended uses and application. The COL Licensee will perform peer reviews of the site-specific PRA in accordance with requirements in PRA standards endorsed by the NRC prior to the use of the PRA to support risk-informed applications and will verify that the PRA model has the technical adequacy and detail to support the proposed licensee programs and applications.

COL 19.3(2) Deleted

COL 19.3(3) Deleted

COL 19.3(4) The Probabilistic Risk Assessment and Severe Accident Evaluation (including consideration of severe accident mitigation alternatives) is updated as necessary to assess specific site information and all associated potential site-specific external hazards (both natural and man-made hazards) that may affect the facility are screened out or subjected to analysis. DCD_19-593

4. The location and design of the PS/Bs as described in Section 3.7.2.8.6 are key design features in protecting the [ ](SRI) R/B [ ](SRI) from the impact of a large commercial aircraft.

5. The physical separation of the east and west PS/Bs, as described in Section 3.7.2.8.6, 3.8.4.4.2, Figure 3J-3 and Figure3J-4, is a key design feature in limiting the loss of electrical power to key safety systems from the impact of a large commercial aircraft.

6. The design of the [ ](SRI) the R/B exterior wall, R/B exterior and inner wall [ ](SRI) the R/B exterior wall [ ](SRI) the R/B exterior wall [ ](SRI) the R/B exterior wall [ ](SRI) as described in Section 3.8.4.4.1 and Figure 3J-1 are key design features in protecting key safety equipment in the R/B.

7. Properties of concrete and reinforcement bars, as described in Section 3.8.4.6.1.3, 3.8.5.4 and Table 3.8.5-2, are key design features in protecting key safety equipment in the R/B.

8. Deleted

19A.4.3 Fire Barriers and Fire Protection Features

The design and location of 3-hour fire barriers, including fire doors, penetration seals, dampers and watertight fire doors that separate the safety divisions within the R/B and east and west PS/Bs, are key design features for the protection of safety-related core cooling equipment within these buildings from the impact of a large commercial aircraft. The assessment credited the design and location of fire barriers (including doors) as depicted on Figures 9A-1 through 9A-12 to limit the effects of internal fires created by the impact of a large commercial aircraft. In addition, certain fire barriers, including doors, fast-acting blast dampers and penetration seals, are credited for 5 psid. These 5 psid barriers are identified on Figures 9A-1 through 9A-12. These key design features ensure at least one complete division of safety-related mechanical ECCS equipment and necessary support systems to include cooling water, electrical power supply and distribution, and instrument and control within the R/B and east and west PS/Bs is available to provide core cooling following the impact of a large commercial aircraft.

19A.4.4 Core Cooling Features

The design and physical separation (by fire barriers as described in Section 19A.4.3) of the emergency core cooling systems (described in Section 6.3), of the emergency feedwater system (described in Section 10.4.9), of the main steam depressurization valves (described in Section 10.3.2.3.3), and of the residual heat removal (RHR) system (described in Section~~s~~ 5.4.7) are key primary system design features for assuring core MIC-04-19-00001