October 16 2009

Comanche Peak Nuclear Power Plant, Units 3 & 4
COL Application

Part 2, FSAR

Update Tracking Report

Revision 7

(Non-Security Related Version)

Revision History

Revision	Date	Update Description
0	3/31/2009	Original Issue Updated Chapters: Ch.1, 2, 3, 5, 6, 8, 9, 11, 12, 13, 14, 17 and 19 Incorporated responses to following RAIs: No.1
1	4/24/2009	Updated Chapters: Ch. 2, 6
-	5/1/2009	Updated Chapters: Ch. 1, 5,14 See Luminant Letter no. TXNB-09010 Date 5/1/2009 Incorporated responses to following RAIs: No. 1, 2
2	5/08/2009	Updated Chapters: Ch 1, 2
-	5/26/2009	Updated Chapters: Ch. 7 See Luminant Letter no. TXNB-09020 Date 5/26/2009 Incorporated responses to following RAIs: No. 4, 5
-	6/17/2009	Updated Chapters: Ch. 1,10 See Luminant Letter no. TXNB-09023 Date 6/17/2009 Incorporated responses to following RAIs: No. 6
3	6/30/2009	Updated Chapters: Ch 3 , 9,10,12,14,19
-	8/7/2009	Updated Chapters: Ch. 1, 5, 10

		See Luminant Letter no. TXNB-09028 Date 8/7/2009 Incorporated responses to following RAIs: No. 7, 8
-	8/24/2009	Updated Chapters: Ch. 1, 3, 10 See Luminant Letter no. TXNB-09033 Date 8/24/2009 Incorporated responses to following RAIs: No. 12, 16
-	8/24/2009	Updated Chapters: Ch. 1, 3, 10 See Luminant Letter no. TXNB-09034 Date 8/24/2009 Incorporated responses to following RAIs: No. 17, 20
4	8/28/2009	Updated Chapters: Ch 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14
-	8/28/2009	Updated Chapters: Ch. 2 See Luminant Letter no. TXNB-09035 Date 8/28/2009 Incorporated responses to following RAIs: No. 11, 14, 21, 22
5	9/11/2009	Updated Chapters: Ch 9, 11
-	9/8/2009	Updated Chapters: Ch. 8 See Luminant Letter no. TXNB-09040 Date 9/8/2009 Incorporated responses to following RAIs: No. 23, 24
-	9/10/2009	Updated Chapters: Ch. 2 See Luminant Letter no. TXNB-09042 Date 9/10/2009 Incorporated responses to following RAIs: No. 11, 18, 21, 22

-	9/22/2009	Updated Chapters: Ch. 3 See Luminant Letter no. TXNB-09047 Date 9/22/2009 Incorporated responses to following RAIs: No. 25, 27
-	9/24/2009	Updated Chapters: Ch. 11 See Luminant Letter no. TXNB-09048 Date 9/24/2009 Incorporated responses to following RAIs: No. 29
6	10/6/2009	Updated Chapters: Ch 3, 14, 19
-	8/11/2009	Updated Chapters: Ch. 9 See Luminant Letter no. TXNB-09030 Date 8/11/2009 Incorporated responses to following RAIs: No. 10
-	9/22/2009	Updated Chapters: Ch. 19 See Luminant Letter no. TXNB-09047 Date 9/22/2009 Incorporated responses to following RAIs: No. 26
-	9/24/2009	Updated Chapters: Ch. 19 See Luminant Letter no. TXNB-09048 Date 9/24/2009 Incorporated responses to following RAIs: No. 28
7	10/16/2009	Updated Chapters: Ch 1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 19

Chapter 1

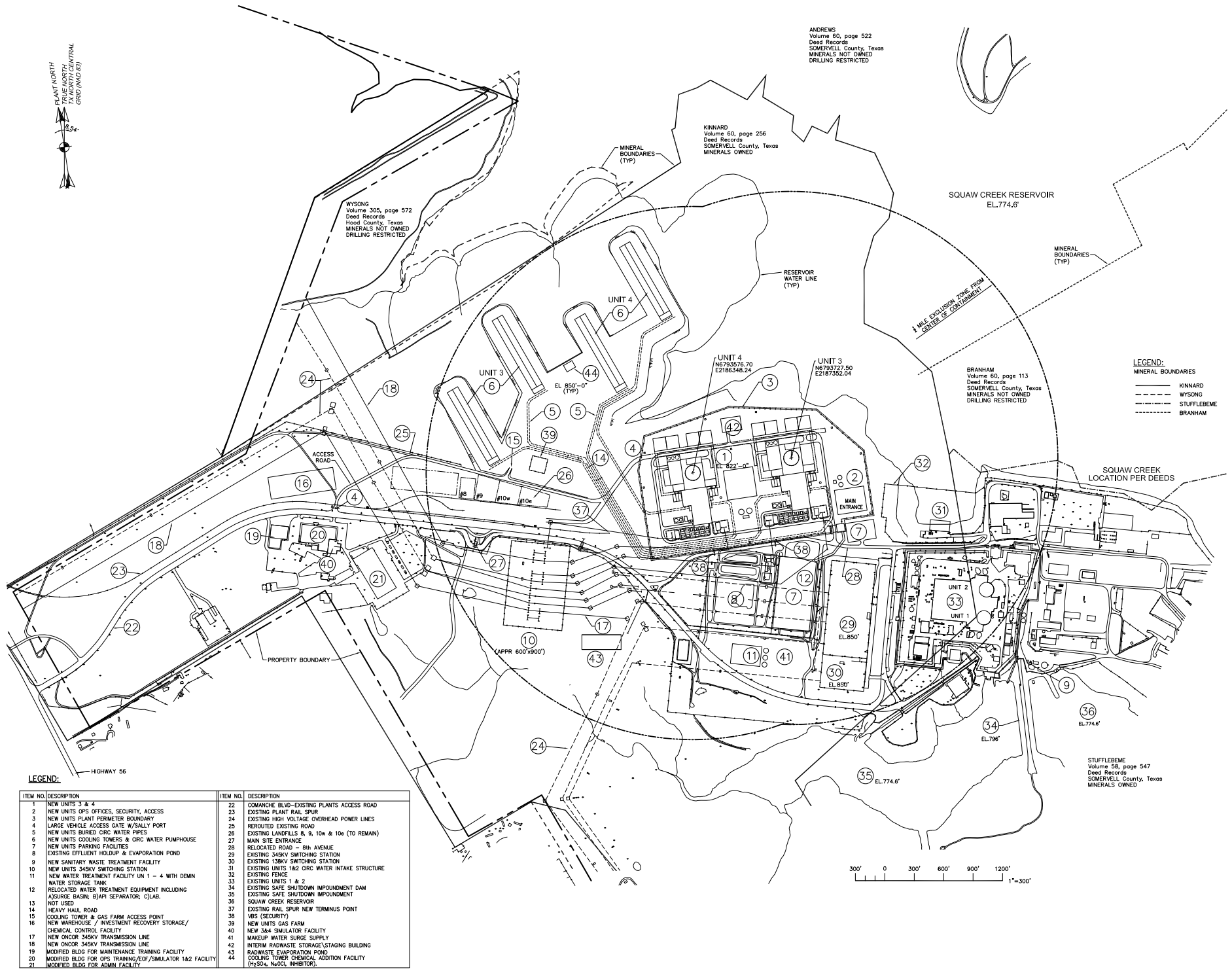
Chapter 1 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00586	1.2	1.2-3 1.2-4	Consistent with Subsection 9.4.5.2.6	Add “UHS” before “ESW pump”.	0
CTS-00586	1.2	1.2-4	Erratum	Change the number of pumps.	0
CTS-00534	1.8	1.8-13	Consistent with DCD Rev.1	Correct COL 3.2(4) and 3.2(5) to reflect wording changes in DCD Rev1.	0
CTS-00535	1.8	1.8-16	Consistent with DCD Rev.1	Correct COL3.5(2) to reflect wording changes in DCD Rev1.	0
CTS-00536	1.8	1.8-23	Editorial correction	Change “AD/V2” to “AD/V^2”.	0
CTS-00537	1.8	1.8-28	Consistent with DCD Rev.1	Correct COL3.8(19) to reflect wording changes in DCD Rev1.	0
CTS-00527	1.8	1.8-30	Consistent with DCD Rev.1	Correct COL3.9(2) to reflect wording changes in DCD Rev1.	0
CTS-00538	1.8	1.8-33	Consistent with DCD Rev.1	Correct COL3.10(9) to reflect wording changes in DCD Rev1.	0
CTS-00550	1.8	1.8-41	Editorial correction	Delete “these” from COL 6.2(1).	0
CTS-00539	1.8	1.8-43	Editorial correction	Add “and” in COL 6.4(5).	0
CTS-00540	1.8	1.8-55	Editorial correction	Change “an” to “a ” in COL10.3(1).	0
CTS-00541	1.8	1.8-56	Editorial correction	Change “deta” to “data” in COL11.2(3).	0
CTS-00542	1.8	1.8-61	Consistent with DCD Rev.1	Correct COL12.1(1) to reflect wording changes in DCD Rev1.	0
DCD_12.01-2	1.8	1.8-61	Delete Outdated RG	Delete reference to RG8.20, 8.26, and 8.32 from COL12.1(3).	0
CTS-00543	1.8	1.8-64	Consistent with DCD Rev.1	Correct COL13.1(5), 13.2(2) and 13.2(3) to reflect wording changes in DCD Rev1.	0
CTS-00610	13.5.2	1.8-66	Update	Add Subsection “13.5.2.1” in Table 1.8-201.	0
CTS-00544	1.8	1.8-67	Consistent with DCD Rev.1	Correct COL13.6(1)and 13.7(1) to reflect wording changes in DCD Rev1.	0
CTS-00545	1.8	1.8-70	Consistent with DCD Rev.1	Delete COL16.1_3(1).	0
CTS-00546	1.8	1.8-71	Editorial correction	Delete “and” from COL16.1_3.3.2(1).	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00526	1.8	1.8-74	Consistent with DCD Rev.1	Correct COL17.5(1) to reflect wording changes in DCD Rev1.	0
CTS-00530	1.9	1.9-7	Correct Corresponding Section	Delete reference to 5.2.1.2 from RG1.84.	0
CTS-00529	1.9	1.9-16	Correct COLA/FSAR Status	Add “with exceptions” to “Conformance” in RG 4.15.	0
DCD_12.01-2	1.9	1.9-18 1.9-19	Delete Outdated RG	Delete reference to RG8.20, 8.26, and 8.32 from Table1.9-203.	0
RCOL2_14.03-1	Table 1.8-201	1.8-69	Responses to RAI No. 1 Luminant Letter TXNB-09010 Dated 5/1/2009	Add FSAR location “14.2.12.1.90.C8” as resolution of COL 14.2(10).	-
CTS-00703	Table 1.9-201	1.9-4	To Reflect CPNPP Units 3 and 4 compliance with RG 1.23.	Added “Second Prepared Revision, April 1986” in the Revision/Date category and “revision of record CPNPP Units 1 and 2” to the COLA FSAR Status category.	2
RCOL2_10.02.03-01	Table 1.8-201	1.8-54	Response to RAI No. 6 Luminant Letter no.TXNB-09023 Date 06/17/2009	For COL 10.2(1), replace the word “develop” with “establish a” and delete “and then to implement” in the first sentence. Delete the entire second sentence. Insert “A” under the column “COL Applicant Item”; delete “H” and delete “b” from columns labeled “COL Holder Item” and “Rationale”.	-
RCOL2_10.03.06-2	Table 1.8-201	1.8-55	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Replace the revision number for NSAC-202L from “R3” to “R2”. Insert “and are susceptible to erosion-corrosion damage” at end of 1st sentence for COL 10.3(1).	-
RCOL2_10.03-1	Table 1.8-201	1.8-55	Response to RAI No. 16 Luminant Letter no.TXNB-09033 Date 08/24/2009	Delete COL 10.3(2) description and state “Delete from DCD”.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_01-1	Table 1.7-202	1.7-3	Response to RAI No. 20 Luminant Letter no.TXNB-09034 Date 08/24/2009	Delete Figure 9.2.4-201, "Sanitary Wastewater Treatment System Flow Diagram," from Table 1.7-202.	-
CTS-00843	Figure 1.2-1R	1.2-5	Erratum	Revise the coordinates of the center of the reactor of CPNPP unit 3.	7
MAP-1-101	Figure 1.2-1R (1/2)	1.2-5	Reflect Changes of DCD layout	Enclose the Refueling Water Auxiliary Tank and the Primary Make-up Water Tanks with a building.	7
MAP-1-101	Figure 1.2-1R (2/2)	1.2-6	Reflect Changes of DCD layout	Enclose the Refueling Water Auxiliary Tank and the Primary Make-up Water Tanks with a building.	7
MAP-1-102	Figure 1.2-2R	1.2-7	Reflect Changes of DCD layout	Incorporate layout changes of R/B, A/B, PS/B, AC/B, and T/B in DCD Rev.2.	7
MAP-1-101	Figure 1.2-201	1.2-8	Reflect Changes of DCD layout	Enclose the Refueling Water Auxiliary Tank and the Primary Make-up Water Tanks with a building.	7
CTS-00862	Table 1.6-201	1.6-1	Reflect update of referenced reports	Update the report numbers and revisions.	7
MAP-11-001	Table 1.6-201	1.6-1	Deletion of COL Item	Delete "11.3".	7
DCD_14.02-8	Table 1.9-201 (Sheet 1 of 12)	1.9-4	Reflect Response to DCD RAI No. 27	Delete "Appendix 14AA"	7
DCD_14.02-8	Table 1.9-201 (Sheet 2 of 12)	1.9-5	Reflect Response to DCD RAI No. 27	Delete "Appendix 14AA"	7
DCD_14.02-8	Table 1.9-201 (Sheet 4 of 12)	1.9-7	Reflect Response to DCD RAI No. 27	Delete "Appendix 14AA"	7
CTS-00863	Table 1.9-201 (Sheet 6 of 12)	1.9-9	Erratum	Change "3.5.1.3" to "3.5.1.3.1". Add "3.5.1.3.2".	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00903	Table 1.9-201 (Sheet 9 of 12)	1.9-12	Editorial correction	Delete “as a license condition”. Add “and surveillance frequency control program”.	7
CTS-00903	Table 1.9-201 (Sheet 9 of 12)	1.9-12	Editorial correction	Delete “risk” managed technical specification as a license condition. Add “surveillance frequency control program”	7
CTS-00863	Table 1.9-201 (Sheet 10 of 12)	1.9-13	Erratum	Change “15.6.2” to “15.6.2.5”. Delete “appendix 15A”.	7
CTS-00863	Table 1.9-201 (Sheet 12 of 12)	1.9-15	Erratum	Delete “15.0.3”.	7
CTS-00864	Table 1.9-203 (Sheet 1 of 3)	1.9-17	Reflect withdrawal of R.G.	Delete R.G. 8.1.	7
CTS-00865	Table 1.9-203 (Sheet 1 of 3)	1.9-17	Erratum	Change “12.1.1.3” to “12.1.1.3.2”	7
CTS-00866	Table 1.9-206 (Sheet 1 of 2)	1.9-24	Erratum	Change “3.5.1.3” to “3.5.1.3.1”. Add “3.5.1.3.2”.	7
CTS-00867	Table 1.9-211	1.9-30	Erratum	Add “10.4.5.3”.	7
CTS-00904	Table 1.9-217	1.9-37	Editorial correction	Delete “ [Risk Informed Technical Specification Initiative 4b] planned before fuel load as a license condition”. Add “Surveillance Frequency Control Program”.	7



LEGEND:

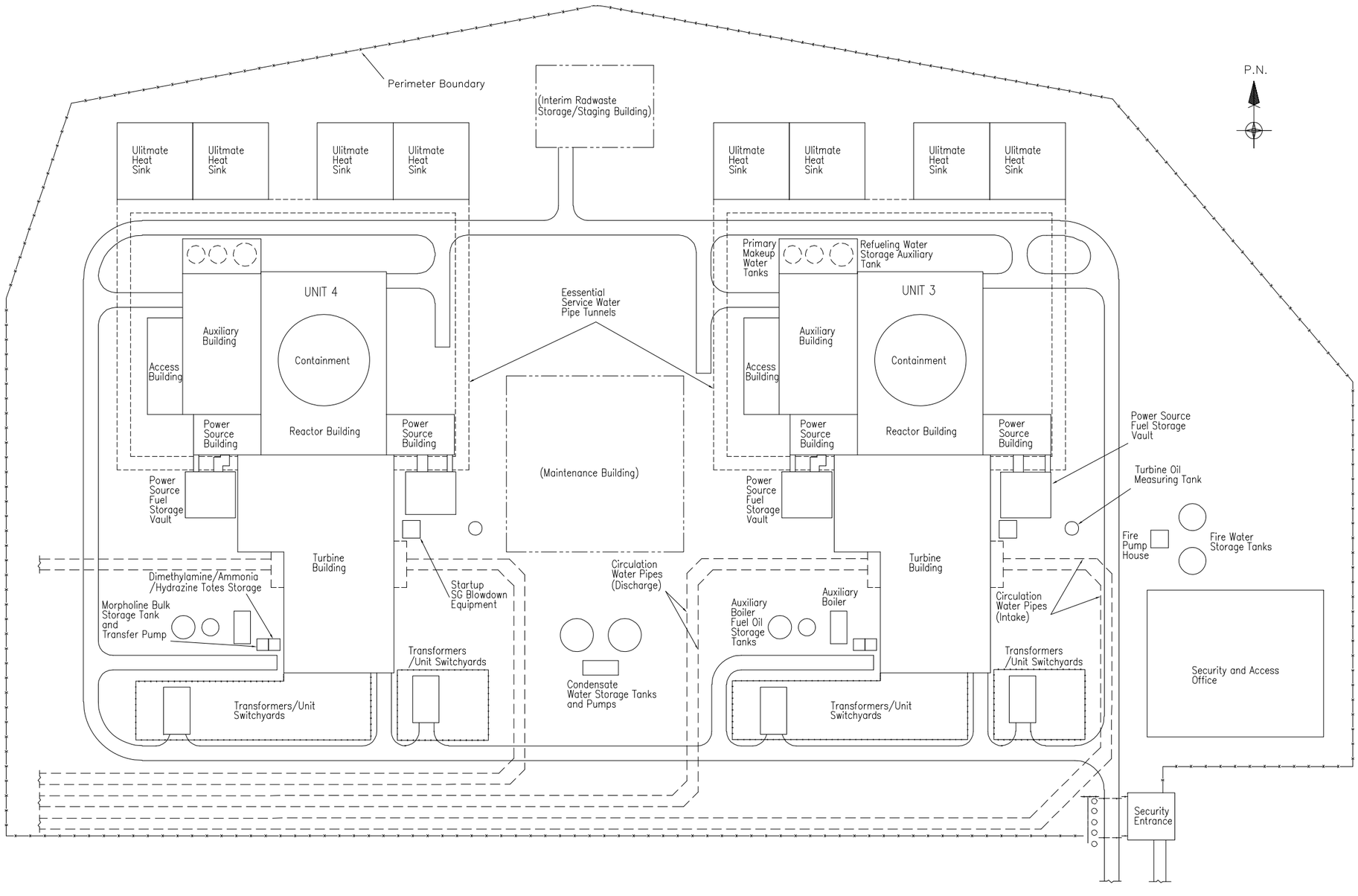
ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
1	NEW UNITS 3 & 4	22	COMANCHE BLVD–EXISTING PLANTS ACCESS ROAD
2	NEW UNITS OPS OFFICES, SECURITY, ACCESS	23	EXISTING PLANT RAIL SPUR
3	NEW UNITS PLANT PERIMETER BOUNDARY	24	EXISTING HIGH VOLTAGE OVERHEAD POWER LINES
4	LARGE VEHICLE ACCESS GATE W/SALLY PORT	25	REROUTED EXISTING ROAD
5	NEW UNITS BURIED CIRC WATER PIPES	26	EXISTING LANDFILLS 8, 9, 10w & 10e (TO REMAIN)
6	NEW UNITS COOLING TOWERS & CIRC WATER PUMPHOUSE	27	MAIN SITE ENTRANCE
7	NEW UNITS PARKING FACILITIES	28	RELOCATED ROAD – 8th AVENUE
8	EXISTING EFFLUENT HOLDUP & EVAPORATION POND	29	EXISTING 345KV SWITCHING STATION
9	NEW SANITARY WASTE TREATMENT FACILITY	30	EXISTING 138KV SWITCHING STATION
10	NEW UNITS 345KV SWITCHING STATION	31	EXISTING UNITS 1&2 CIRC WATER INTAKE STRUCTURE
11	NEW WATER TREATMENT FACILITY UN 1 – 4 WITH DEMIN WATER STORAGE TANK	32	EXISTING FENCE
		33	EXISTING UNITS 1 & 2
12	RELOCATED WATER TREATMENT EQUIPMENT INCLUDING A)SURGE BASIN; B)API SEPARATOR; C)LAB.	34	EXISTING SAFE SHUTDOWN IMPOUNDMENT DAM
		35	EXISTING SAFE SHUTDOWN IMPOUNDMENT
13	NOT USED	36	SQUAW CREEK RESERVOIR
14	HEAVY HAUL ROAD	37	EXISTING RAIL SPUR NEW TERMINUS POINT
15	COOLING TOWER & GAS FARM ACCESS POINT	38	VBS (SECURITY)
16	NEW WAREHOUSE / INVESTMENT RECOVERY STORAGE,/ CHEMICAL CONTROL FACILITY	39	NEW UNITS GAS FARM
		40	NEW 3&4 SIMULATOR FACILITY
17	NEW ONCOR 345KV TRANSMISSION LINE	41	MAKEUP WATER SURGE SUPPLY
18	NEW ONCOR 345KV TRANSMISSION LINE	42	INTERIM RADWASTE STORAGE\STAGING BUILDING
19	MODIFIED BLDG FOR MAINTENANCE TRAINING FACILITY	43	RADWASTE EVAPORATION POND
20	MODIFIED BLDG FOR OPS TRAINING/EOF/SIMULATOR 1&2 FACILITY	44	COOLING TOWER CHEMICAL ADDITION FACILITY (H_2SO_4, $NaOCl$, INHIBITOR).
21	MODIFIED BLDG FOR ADMIN FACILITY		

CTS-00843

MAP-1-101

CP COL 1.2(1)

Figure 1.2-1R Comanche Peak Units 3 & 4 Site Plan (Sheet 1 of 2)



MAP-1-101

CP COL 1.2(1)

Figure 1.2-1R Comanche Peak Units 3 & 4 Site Plan (Sheet 2 of 2)

(SRI)

(SRI)

CP SUP 1.6(1)

Table 1.6-201

Material Referenced

Report Number	Title	FSAR Section Number	
52-021, Docket Number	US-APWR Design Control Document, Rev. ~~1~~2	All FSAR Chapters	CTS-00862
NEI 07-09A	Generic FSAR Template Guidance for Offsite Dose Calculation Manual Program Description, Rev.~~1~~0	~~11.3,~~ 11.5	MAP-11-001 CTS-00862
NEI 07-10A	Generic FSAR Template Guidance for Process Control Program, Rev.~~2~~0	11.4	CTS-00862 CTS-00862
NEI 07-08	Generic FSAR Template Guidance for Ensuring That Occupational Radiation Exposures Are As Low As Is Reasonably Achievable (ALARA), Rev. ~~1~~3	12.1	CTS-00862
NEI 07-03A	Generic FSAR Template Guidance for Radiation Protection Program Description, Rev. ~~5~~0	12.1, 12.5	CTS-00862 CTS-00862
NEI 06-13A	Template for an Industry Training Program Description, Rev. 1	13.2	
NEI 06-06	Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites, Rev. 3	13.7	
NEI 06-09	Risk-Managed Technical Specifications (RMTS) Guidelines, Rev. 0	16.1, Chapter 19	
NEI 04-10	Risk-Informed Method for Control of Surveillance Frequencies, Rev. 1	16.1	
NEI 06-14A	Quality Assurance Program Description, Rev. 0	17.5	
NEI 07-02A	Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52, Rev. 0	17.6	

CP COL 1.9(1)

Table 1.9-201 (Sheet 1 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section	
1.8	Qualification and Training of Personnel for Nuclear Power Plants	Revision 3 May 2000	Conformance with exceptions (Criterion 2: The minimum qualification requirement of the plant staff conforms to CPNPP Units 3 and 4 technical specification and Chapter 13. And QA conforms to quality assurance program description [QAPD].)	12.1.1.3.1 13.1 13.2 14.2 ~~Appendix 14AA~~ COLA Part 4	DCD_14.02-8
1.12	Nuclear Power Plant Instrumentation for Earthquakes	Revision 2 March 1997	Conformance	3.7.4 13.4	
1.16	Reporting of Operating Information – Appendix A Technical Specifications	Revision 4 August 1975	Conformance with exceptions (CPNPP Units 3 and 4 conform to 10 CFR 50.72 and 50.73 and technical specification requirement.)	14.2.6 14.2.7 COLA Part 4	
1.21	Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants	Revision 1 June 1974	Conformance with exceptions (ANSI N13.1-1999 is applied in C.6.)	3.1.6 11.5.1 11.5.2 12.3.4	
1.23	Meteorological Monitoring Programs for Nuclear Power Plants	Second Proposed Revision 1 ~~March 2007~~April 1986	Conformance; revision of record CPNPP Units 1 and 2	2.3.3 2.3.4	CTS-00703 CTS-00703
1.24	Assumptions Used for Evaluating the Potential Radiological Consequences of a Pressurized Water Reactor Radioactive Gas Storage Tank Failure	Revision 0 March 1972	Conformance	11.3.3	

Table 1.9-201 (Sheet 2 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section
1.27	Ultimate Heat Sink for Nuclear Power Plants	Revision 2 January 1976	Conformance	2.4.2 - 2.4.4 2.4.11 9.2.1.3 9.2.5 COLA Part 4
1.28	Quality Assurance Program Requirements (Design and Construction)	Revision 3 August 1985	Conformance with exception (QAPD conforms with SRP 17.5 and NQA-1 1994 Edition.)	14.2.7 17.2 17.5
1.29	Seismic Design Classification	Revision 4 March 2007	Conformance	2.4.2 - 2.4.4 3.2
1.30	Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment	Revision 0 August 1972	Conformance with exception (QAPD conforms with SRP 17.5 and NQA-1 1994 Edition.)	14.2.7 17.5
1.33	Quality Assurance Program Requirements (Operation)	Revision 2 February 1978	Conformance with exception (QAPD conforms with SRP 17.5 and NQA-1 1994 Edition.)	11.5.2 13.1 13.5 17.2 17.5 COLA Part 4
1.35	In-Service Inspection (ISI) of Ungrouted Tendons in Prestressed Concrete Containments	Revision 3 July 1990	Conformance (Note: limited to design considerations; implementation of ISI physical inspection will be by COL holder)	3.8.1.2 3.8.1.7
1.37	Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants	Revision 1 March 2007	Conformance (Note: QAPD commits to RG 1.37, in accordance with SRP 17.5.)	14.2.7 ~~Appendix 14AA~~ 17.2 17.5

DCD_14.02-8

Table 1.9-201 (Sheet 4 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section	
1.68	Initial Test Programs for Water-Cooled Nuclear Power Plants	Revision 3 March 2007	Conformance	14.2 Appendix 14A ~~Appendix 14AA~~	DCD_14.02-8
1.76	Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants	Revision 1 March 2007	Conformance	2.3.1.2.3 3.3.2 3.5.1	
1.78	Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release	Revision 1 December 2001	Conformance	2.2.3 6.4.4	
1.82	Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident	Revision 3 November 2003	Conformance	6.2.2	
1.83	In-service Inspection of Pressurized Water Reactor Steam Generator Tubes	Revision 1 July 1975	Not applicable (This RG is considered for withdrawal by NRC.)	N/A	
1.84	Design, Fabrication, and Materials Code Case Acceptability, ASME Section III	Revision 34 October 2007	Conformance	3.12.2 4.5.1.1 4.5.2.1 ~~5.2.1.2~~	CTS-00530
1.86	Termination of Operating Licenses for Nuclear Reactors	Revision 0 June 1974	Not applicable (This RG is outside the scope of the FSAR.)	N/A	
1.91	Evaluations of Explosions Postulated To Occur on Transportation Routes Near Nuclear Power Plants	Revision 1 February 1978	Conformance	2.2	

Table 1.9-201 (Sheet 6 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section
1.111	Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors	Revision 1 July 1977	Conformance	2.3.5 11.4.3
1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I	Revision 1 April 1977	Conformance	11.2.3 11.4.3 11.5.2
1.114	Guidance to Operators at the Controls and to Senior Operators in the Control Room of a Nuclear Power Unit	Revision 2 May 1989	Conformance	13.5
1.115	Protection Against Low-Trajectory Turbine Missiles	Revision 1 July 1977	Conformance	3.5.1.3.1 3.5.1.3.2 CTS-00863
1.116	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems	Revision 0-R May 1977	Conformance with exception (QAPD conforms with SRP 17.5 and Subpart 2.8 of NQA-1 1994 Edition.)	14.2.7 17.5
1.122	Development of Floor Design Response Spectra for Seismic Design of Floor-Supported Equipment or Components	Revision 1 February 1978	Conformance	Appendix 3KK Appendix 3LL Appendix 3MM
1.127	Inspection of Water-Control Structures Associated with Nuclear Power Plants	Revision 1 March 1978	Conformance	2.4 2.5 3.8.4.7
1.129	Maintenance, Testing, and Replacement of Vented Lead-Acid Storage Batteries for Nuclear Power Plants	Revision 2 February 2007	Conformance	8.1.5.3 8.3.2
1.132	Site Investigations for Foundations of Nuclear Power Plants	Revision 2 October 2003	Conformance	2.5.1 2.5.4

Table 1.9-201 (Sheet 9 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section
1.167	Restart of a Nuclear Power Plant Shut Down by a Seismic Event	Revision 0 March 1997	Conformance	N/A
1.174	An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis	Revision 1 November 2002	Not applicable (This RG is considered during preparation of risk managed technical specification and surveillance frequency control program~~as a license condition~~.)	N/A CTS-00903
1.175	An Approach for Plant-Specific, Risk-Informed Decision-making: In-service Testing	Revision 0 August 1998	Not applicable (CPNPP Units 3 and 4 approach is to address the deterministic requirements of 10 CFR 50 and 10 CFR 52, not a risk-based approach.)	N/A
1.176	An Approach for Plant-Specific, Risk-Informed Decision-making: Graded Quality Assurance	Revision 0 August 1998	Not applicable (This RG has been withdrawn by NRC.)	N/A
1.177	An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications	Revision 0 August 1998	Not applicable. (This regulatory guide is considered during preparation of surveillance frequency control program~~risk managed technical specification as a license condition~~.)	N/A CTS-00903
1.178	An Approach for Plant-Specific Risk-Informed Decision-making for In-service Inspection of Piping	Revision 1 September 2003	Not applicable (CPNPP Units 3 and 4 approach is to address the deterministic requirements of 10 CFR 50 and 10 CFR 52, not a risk-based approach.)	N/A

Table 1.9-201 (Sheet 10 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section
1.181	Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)	Revision 0 September 1999	Conformance (Note: This FSAR style meets the guidance of RG 1.206.)	N/A
1.182	Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants	Revision 0 May 2000	Conformance	17.6 COLA Part 4
1.183	Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors	Revision 0 July 2000	Conformance	12.2.1.3 12.3.1.2.2 12.3.2.2.7 12.4.1.8 12.4.1.9.4.2 15.0.3 15.1.5.5 15.3.3.5 15.4.8.5 15.6.2.5 CTS-00863 15.6.3.5 15.6.5.5 15.7.4 ~~Appendix 15A~~ CTS-00863
1.184	Decommissioning of Nuclear Power Reactors	Revision 0 July 2000	Not applicable (CPNPP Units 3 and 4 COLA is an application for new units. RG refers to decommissioning of an existing plant.)	N/A
1.185	Standard Format and Content for Post-Shutdown Decommissioning Activities Report	Revision 0 July 2000	Not applicable (CPNPP Units 3 and 4 COLA is an application for new units. RG refers to decommissioning activities for an existing plant.)	N/A

Table 1.9-201 (Sheet 12 of 12)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 1 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section
1.196	Control Room Habitability at Light-Water Nuclear Power Reactors	Revision 1 January 2007	Conformance	2.3.4 6.4 9.4.1 ~~15.0.3~~ CTS-00863 COLA Part 4
1.197	Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors	Revision 0 May 2003	Conformance	6.4 COLA Part 4
1.198	Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites	Revision 0 November 2003	Conformance	2.5.4
1.202	Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors	Revision 0 February 2005	Not applicable (Application for CPNPP Units 3 and 4 is for new units. RG applies to activities that occur during decommissioning.)	N/A
1.205	Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants	Revision 0 May 2006	Not applicable (Risk informed performance based fire protection is not used.)	N/A
1.206	Combined License Applications for Nuclear Power Plants (LWR Edition)	Revision 0 June 2007	Conformance with exceptions (The guidance for referencing an early site permit and passive advanced light-water reactor [ALWR] plant is not applicable.)	All chapters and appendices
1.208	A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion	Revision 0 March 2007	Conformance	2.5.2 3.7

CP COL 1.9(1)

Table 1.9-203 (Sheet 1 of 3)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Division 8 Regulatory Guides

RG Number	RG Title	Revision/Date	COLA FSAR Status	Corresponding Chapter/ Section	
~~8.1~~	~~Radiation Symbol~~	~~Revision 0 February 1973~~	~~Conformance with exception~~ ~~(Color requirements for radiation symbol are in accordance with 10 CFR 20.1901.)~~	~~N/A~~	CTS-00864
8.2	Guide for Administrative Practices in Radiation Monitoring	Revision 0 February 1973	Conformance	12.1.3 12.3.4	
8.4	Direct-Reading and Indirect-Reading Pocket Dosimeters	Revision 0 February 1973	Conformance	12.1.3	
8.5	Criticality and Other Interior Evacuation Signals	Revision 1 March 1981	Conformance	12.1	
8.6	Standard Test Procedure for Geiger-Muller Counters	Revision 0 May 1973	Conformance	12.1.3	
8.7	Instructions for Recording and Reporting Occupational Radiation Exposure Data	Revision 2 November 2005	Conformance	12.1.3	
8.8	Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations Will Be as Low as Is Reasonably Achievable	Revision 3 June 1978	Conformance	3.7.4.2 11.3.1 11.4.1 11.4.2 12.1.1.3.2 12.1.2 12.2.1.1.10 12.3.1 12.3.2.1 12.3.2.2 12.3.3.3 12.3.4	CTS-00865

CP COL 1.9(1)

Table 1.9-206 (Sheet 1 of 2)

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Standard Review Plan Chapter 3 Design of Structures, Systems, Components & Equipment

SRP Section	SRP Title	Revision/Date	COLA FSAR Status	Appears in FSAR Chapter/Section
3.2.1	Seismic Classification	Revision 2 March 2007	Conformance	3.2.2 3.7-3.12
3.3.1	Wind Loading	Revision 3 March 2007	Conformance	3.3.1
3.3.2	Tornado Loads	Revision 3 March 2007	Conformance	3.3.2
3.4.2	Analysis Procedures	Revision 3 March 2007	Conformance	3.4.2
3.5.1.3	Turbine Missiles	Revision 3 March 2007	Conformance	3.5.1.3.1 3.5.1.3.2 CTS-00866
3.5.1.4	Missiles Generated by Tornadoes and Extreme Winds	Revision 3 March 2007	Conformance	3.5.2
3.5.1.5	Site Proximity Missiles (Except Aircraft)	Revision 4 March 2007	Conformance	3.5.1.5
3.5.1.6	Aircraft Hazards	Revision 3 March 2007	Conformance	3.5.1.6
3.5.2	SSCs to Be Protected From Externally-Generated Missiles	Revision 3 March 2007	Conformance	3.5.2
3.7.1	Seismic Design Parameters	Revision 3 March 2007	Conformance	3.7.1 3.8
3.7.2	Seismic System Analysis	Revision 3 March 2007	Conformance	3.7.2 3.8
3.7.3	Seismic Subsystem Analysis	Revision 3 March 2007	Conformance	3.7.3 3.9 3.12

CP COL 1.9(1)

Table 1.9-211

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Standard Review Plan Chapter 10 Steam and Power Conversion Systems

SRP Section	SRP Title	Revision/Date	COLA FSAR Status	Appears in FSAR Chapter/Section
10.2.3	Turbine Rotor Integrity	Revision 2 March 2007	Conformance	10.2.3.5 10.2.5
10.3	Main Steam Supply System	Revision 4 March 2007	Conformance	10.3.2.2
10.3.6	Steam and Feedwater System Materials	Revision 3 March 2007	Conformance	10.3.6.3
10.4.5	Circulating Water System	Revision 3 March 2007	Conformance	10.4.5.2 10.4.5.3 10.4.5.6
10.4.7	Condensate and Feedwater System	Revision 4 March 2007	Conformance with exceptions (Criterion 8 applies only to boiling water reactors [BWRs].)	10.3.6.3
10.4.8	Steam Generator Blowdown System	Revision 3 March 2007	Conformance	10.4.8.1 10.4.8.2 10.4.8.5

CTS-00867

CP COL 1.9(1)

Table 1.9-217

Comanche Peak Nuclear Power Plant Units 3 & 4 Conformance with Standard Review Plan Chapter 16 Technical Specifications

SRP Section	SRP Title	Revision/Date	COLA FSAR Status	Appears in FSAR Chapter/Section
16.0	Technical Specifications	Revision 2 March 2007	Conformance (Note: The CPNPP Units 3 and 4 Technical Specifications are based on the generic US-APWR Technical Specifications, which were developed consistent with NUREG-1431. The CPNPP Units 3 and 4 version of the Technical Specifications have been revised to reflect site-specific information.)	Chapter 16 COLA Part 4
16.1	Risk-Informed Decision Making: Technical Specifications	Revision 1 March 2007	Not applicable (This SRP is considered during preparation of Risk-Managed Technical Specification and Surveillance Frequency Control Program ~~[Risk-Informed Technical Specification Initiative 4b] planned before fuel load as a license condition~~.)	N/A

CTS-00904

Chapter 2

Chapter 2 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00636	Table 2.0-1R	2.0-3 2.0-13	Editorial correction	Change “X/Q” to “χ/Q”. (χ is a Greek letter.)	0
CTS-00637	Table 2.2-203 Table 2.2-206	2.2-28 2.2-33	Editorial correction	Change “CPNPP Units 1 & 2” to “CPNPP Units 1 and 2”.	0
CTS-00587	Table 2.3-206	2.3-71	Erratum	Change “5” to “3”.	0
CTS-00636	Table 2.3-342	2.3-252 2.3-253	Editorial correction	Change “X/Q” to “χ/Q”. (χ is a Greek letter.)	0
CTS-00590	2.4.1.1	2.4-2	Editorial correction	Change “grade” to “floor elevation”.	0
CTS-00591	2.4.1.1	2.4-3	Editorial correction	Change “Category I seismic requirement” to “seismic category I requirement”.	0
CTS-00661	2.4.1.2.1	2.4-5	Editorial correction	Add "(Figure 2.4.1-207)" after Morris-Sheppard Dam.	0
CTS-00662	2.4.1.2.1	2.4-6	Editorial correction	Add reference numbers according to CTS-00666.	0
CTS-00592	2.4.1.2.3.2	2.4-7	Editorial correction	Change “intake pumping station” to “makeup water intake structure” and “cooling tower makeup pumps” to “makeup water pumps, makeup water jockey pump”.	0
CTS-00663	2.4.1.2.3.3	2.4-8	Editorial correction	Add reference numbers as appropriate according to CTS-00666.	0
CTS-00664	2.4.1.2.3.3	2.4-8	Editorial correction	Delete "contributing".	0
CTS-00665	2.4.1.2.3.3	2.4-8	Update	Change "16,113 sq mi" to "25,679 sq mi".	0
CTS-00593	2.4.11.5	2.4-38	Editorial correction	Remove “to the cooling water system flow”.	0
CTS-00655	2.4.12.2.4	2.4-46	Editorial correction	Change “X” to “XX”.	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00513 RCOL2_ 2.4.13-1 through RCOL2_ 2.4.13-7	2.4.12.2.4 2.4.12.2.5 2.4.12.3.1 2.4.12.5 2.4.13	2.4-46 through 2.4-64	To reflect information provided during acceptance review	Re-write section reflecting RAI #1.	0
CTS-00656	2.4.12.3.1	2.4-51	Editorial correction	Delete “(or are) expected to be”.	0
CTS-00657	2.4.12.3.1	2.4-52	Editorial correction	Change X to lower-case in mathematical expressions.	0
CTS-00658	2.4.12.5	2.4-53	Editorial correction	Add “aquifer”.	0
CTS-00659	2.4.13	2.4-56	Editorial correction	Change “Kd” to K_d”.	0
CTS-00666	2.4.16	2.4-63	Editorial correction	Add new references.	0
CTS-00589	Table 2.4.1-203	2.4-68 through 2.4-70	Erratum	Add reference citations.	0
CTS-00654	Table 2.4.1-203	2.4-68 through 2.4-70	Editorial correction	Change header titles and lower case from MSL to msl.	0
CTS-00655	Table 2.4.1-203	2.4-68 through 2.4-70	Erratum	Change values to match reference.	0
CTS-00588	Table 2.4.1-206	2.4-72	Erratum	Change “8186” to” 6354” and “0.383” to “0.362”. Add reference citations.	0
CTS-00594	2.5.1	2.5-53	Clarification	Add “potable” and “beneath the site”.	0
CTS-00599	2.5.2	2.5-61 2.5-62	Editorial correction	Delete the semi-colon in the bullet item list.	0
CTS-00595	2.5.2	2.5-61	Editorial correction	Remove IBR statement.	0
CTS-00515	2.5.2.5.1	2.5-110 through 2.5-113	To reflect information provided during acceptance review	Add three pages to clarify discussion.	0
CTS-00516	2.5.2.6.1.1 2.5.2.6.1.2	2.5-113 2.5-117	To reflect information provided during acceptance review	Revise Subsection reflecting commitment to NRC.	0
CTS-00667	2.5.4.3.3	2.5-166	Editorial	Change "The average	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			correction	elevation of the top of engineering Layer C is about 780 ft to 782 ft below the Unit 3 power block, and about 782 ft to 784 ft below the Unit 4 power block (Figure 2.5.4-214)." to "The average elevation of the top of engineering Layer C is approximately 782 ft below the Unit 3 and Unit 4 power block (Figure 2.5.4-214)".	
CTS-00597	2.5.4	2.5-121	Editorial correction	Remove IBR statement.	0
CTS-00514	2.5.4.5.4	2.5-177 2.5-179	To reflect information provided during acceptance review	Revise Subsection reflecting commitment to NRC.	0
CTS-00517	2.5.4.8	2.5-187	To reflect information provided during acceptance review	Revise Subsection reflecting commitment to NRC.	0
CTS-00598	2.5.5	2.5-195	Editorial correction	Remove IBR statement.	0
CTS-00515	2.5.2.5	2.5-224	Editorial correction	Revise Subsection reflecting commitment to NRC.	0
CTS-00515	2.5.7	2.5-227 2.5-228	To reflect information provided during acceptance review	Add references 2.5-432 through 2.5-436	0
CTS-00515	2.5.7	2.5-228	To reflect information provided during acceptance review	Add reference 2.5-432.	0
CTS-00668	Table 2.5.1-201	2.5-229 2.5-230	Editorial correction	Delete "from the Studies of Madole (1988), Crone and Luza (1990), and Swan et al. (1993)"	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				from the title of the table.	
CTS-00669	Table 2.5.1-201	2.5-230	Editorial correction	Add reference citations.	0
CTS-00672	Table 2.5.1-202	2.5-231	Editorial correction	Delete notes.	0
CTS-00673	Table 2.5.1-203	2.5-232	Editorial correction	Add reference citations.	0
CTS-00673	Table 2.5.1-203	2.5-232	Editorial correction	Delete and rewrite notes.	0
CTS-00670	Table 2.5.1-205	2.5-252	Editorial correction	Add reference citations.	0
CTS-00671	Table 2.5.1-206	2.5-254	Editorial correction	Add reference citations.	0
CTS-00674	Table 2.5.2-227	2.5-312	Editorial correction	Delete references in notes.	0
CTS-00515	List of Tables List of Figures	2-xxxii 2-xlviii	Commitment to NRC	Add Tables 2.5.2-230 through 2.5.2-235. Add Figures 2.5.2-240 through 2.5.2-246.	0
CTS-00516	List of Tables List of Figures	2-xxxii 2-xlviii	Commitment to NRC	Add Tables 2.5.2-236 and 2.5.2-237. Add Figures 2.5.2-247 through 2.5.2-252.	0
CTS-00515	Tables 2.5.2-230 through 2.5.2-237	-	To reflect information provided during acceptance review	Add new Tables.	0
CTS-00516	Figures 2.5.2-240 through 2.5.2-250	-	To reflect information provided during acceptance review	Add new Figures	0
MET-04	List of Tables	2-xxiv, 2-xxv	Erratum	Add “Dallas” in front of “Fort Worth” and “Airport” after “Fort Worth” for table number 2.3-296	1
CTS-00696	2.2.2.2.8	2.2-5	Increase information as discussed with NRC during the 03-23-25-09 Hazards	Changed distance for DeCordova to 9.35 miles.	1

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Analysis Audit		
CTS-00697	2.2.2.6	2.2-8	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Added clarification that rail transport of hazardous materials is outside the 5 mile radius of CPNPP 3 & 4	1
CTS-00699	2.2.2.7.1	2.2-9	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Added clarifying statement that the airports listed were predominant airports in the area outside 10 miles that did not exceed the 1000 D^2 criterion. Added back in the discussion for each predominant airport in the area outside the 10 miles.	1
CTS-00698	2.2.3.1.1.2	2.2-12	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Added clarifying discussion on how the Wolf Hollow hazardous materials were sceened for the hazards analysis since quantities were not made available.	1
CTS-00698	2.2.3.1.3.1	2.2-17	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Added clarifying discussion on how the Wolf Hollow hazardous materials were sceened for the control room habitability analysis since quantities were not made available.	1
CTS-00696	2.2.3.1.3.2.2	2.2-18	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Clarified discussion regarding DeCordova was analyzed for Hazards and Control Room Habitablilty analyses even though the distance is outside the 5 mile radius of Units 3 & 4.	1
CTS-00698	Table 2.2-205	2.2-32	Increase	Added footnote that	1

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	the quantities of chemicals were not made available for Wolf Hollow and a pointer added to indicate what sections have the sceening criteria utilized for Wolf Hollow.	
CTS-00696	Table 2.2-214	2.2-43	Increase information as discussed with NRC during the 03-23-25-09 Hazards Analysis Audit	Added IDLH and Max concentration in Control Room and footnote (b) indicating that DeCordova was conservatively analyzed even though it is outside the 5 mile radius of U3/4. Distance to nearest Units 3 and 4 MCR Inlet for DeCordova SES has been revised from 3.6 to 3.7.	1
CTS-00696	Figure 2.2-201		Erratum	Corrected the figure since the location of DeCordova, which is outside the 5 mile radius of CPNPP Units 3 & 4, showed DeCordova inside the 5 mile radius	1
MET-03	2.3.1.2.4	2.3-14	Increase information as discussed with the NRC.	Add “16” to number of days each year; remove “monthly and regional” and add “by county” to wind events to reconcile thunderstorm information.	1
MET-04	2.3.1.2.8	2.3-20	Erratum	Add “the” in front of Dallas Fort Worth Airport	1
MET-13	2.3.2.1.2	2.3-22	Erratum	Replace “2001 through 2006” with “2001 – 2004 and 2006” to describe which data years	1

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				were used.	
MET-13	2.3..2.1.3	2.3-27	Erratum	Replace “2001- 2006” with “2001 – 2004 and 2006” to describe which data years were used.	1
MET-04	2.3.2.1.4	2.3-27	Erratum	Add “Dallas” in front of “Fort Worth”	1
MET-13	2.3.2.2.4	2.3-32	Erratum	Add “Fort” for the years “2001 – 2006”	1
MET-3 MET-13	Table 2.3-211	2.3-83	Erratum	Replace numbers in column “Average per Yr (#/yr) and Replace “2006 and (-24 yr) with “7/31/2006”	1
MET-13	Table 2.3-285	2.3-164	Errata	Replace “2001 – 2006” with “2001 – 2004 and 2006” to describe which data years were used.	1
MET-04	Table 2.3-286	2.3-165	Erratum	Add “Dallas” in front of “Fort Worth” for the title.	1
MET-04	Table 2.3-296	2.3-177	Erratum	Add “Dallas” in front of Fort Worth and “Airport” after Worth in the title	1
MET-04	Table 2.3-299	2.3-180 2.3-181	Erratum	Add “Dallas” in front of ”Fort Worth” in the title	1
CTS-00554	List of Tables	2-xxxiii	Increase information as discussed with the NRC to summarize the reports provided in Luminant’s letter TXNB-08027 to NRC dated November 4, 2008.	Added Tables 2.5.4-228 through 2.5.4-231	2
CTS-00554	List of Figures	2-l	Increase information as discussed with the NRC to summarize the reports	Added Figure 2.5.4-245	2

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.		
CTS-00703	Table 2.3-332	2.3-233 2.3-234	To reflect CPNPP Units 3 and 4 compliance with RG 1.23	Added "Second Proposed Revision, April 1986" to the footnotes	2
CTS-00554	2.5.4.10.1	2.5-189	Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.	Additional discussion and equations to reflect what calculations and analyses were performed to demonstrate bearing capacity.	2
CTS-00554	2.5.4.10.2	2.5-190	Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.	Additional discussion on settlement, including calculations, equations and discussion of laboratory test results, layered versus unlayered method.	2
CTS-00554	2.5.4.10.3	2.5-191	Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated	Additional information added to excavation rebound potential.	2

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			November 4, 2008.		
CTS-00554	2.5.7	2.5-228	Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.	Added references 2.5-432 through 2.5-434 to reflect additional discussion on bearing capacity and settlement subsection discussed.	2
CTS-00554	Tables 2.5-4-228 through 2.5.4-231	-	Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.	Added new tables to reflect bearing capacity discussion and settlement discussion within subsections.	2
CTS-00554	Figure 2.5.4-245		Increase information as discussed with the NRC to summarize the reports provided in Luminant's letter TXNB-08027 to NRC dated November 4, 2008.	Added Figure 2.5.4-245.	2
HYDSV-23	List of Figures	2xliv	Hydrology Site Safety Visist	Added figures to show flow paths to SCR.	4
HYDSV-06 HYDSV-07	Table 2.0-1R		Hydrology Site Safety Visit	Changed the maximum flood level.	4
HYDSV-04	2.4.1.2	2.4-4	Hydrology Site	Clarified what portions of the Brazos	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Safety Visit	River basin were chosen for the dam failure safety analysis.	
HYDSV-05	2.4.1.2	2.4-5	Hydrology Site Safety Visit	Updated section to reflect what reservoirs were considered in the dam failure safety analysis.	4
HYDSV-02	2.4.2.1	2.4-12 2.4-13	Hydrology Site Safety Visit	Added maximum flood level and design basis flood elevation.	4
HYDSV-14	2.4.2.2	2.4-13 2.4-14	Hydrology Site Safety Visit	Changed water surface elevation for flood design.	4
HYDSV-06 HYDSV-07	2.4.2.3	2.4-16	Hydrology Site Safety Visit	Changed the tail water elevation.	4
HYDSV-06 HYDSV-07	2.4.3	2.4-18	Hydrology Site Safety Visit	Revised the surface water elevation for the probably maximum flood.	4
HYDSV-06 HYDSV-07	2.4.3.1	2.4-19	Hydrology Site Safety Visit	Revised the critical temporal distribution for the probably maximum precipitation.	4
HYDSV-06 HYDSV-07	2.4.3.3	2.4-20 2.4-21	Hydrology Site Safety Visit	Added discussion justifying the use of the Snyder's hydrograph applicability under PMF conditions and added a storage discharge relationship was linearly extrapolated to account for discharge from elevation 791 ft msl to 795 ft. msl.	4
HYDSV-06 HYDSV-07	2.4.3.4	2.4-22	Hydrology Site Safety Visit	Changed the SCR peak flood volumetric flow rate.	4
HYDSV-06 HYDSV-07	2.4.3.5	2.4-22	Hydrology Site Safety Visit	Changed the surface water elevation for the HEC-HMS and HEC-RAS models.	4
HYDSV-06 HYDSV-07	2.4.3.6	2.4-22 2.4-23	Hydrology Site	Revised the critical fetch length, critical	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Safety Visit	duration wind speed, wave height, runup, maximum wind speed, and setup for the dam failure analysis.	
HYDSV-04	2.4.4	2.4-24	Hydrology Site Safety Visit	Clarified assumptions of what dam failures were used in the dam failure analysis and why.	4
HYDSV-09	2.4.4.1	2.4-27	Hydrology Site Safety Visit	Clarified which reservoirs in the Brazos River Basin where used in the flooding analysis. Added discussion of what volumes of reservoir water were used in the dam failure analysis. Changed the maximum surface water elevation.	4
CTS-00817 HYDSV-10 HYDSV-11	2.4.5	2.4-29	Hydrology Site Safety Visit	Edited 5th paragraph 2nd to last sentence of section from “Any effects on the Squaw Creek.. to read “Any effects on SCR…”. Added discussion as to why the seismic induced wave and the landslide induced wave is not plausible for SCR. Changed the water surface elevation due to wind activity and changed the PMF coincident wind wave.	4
HYDSV-03	2.4.5	2.4-29	Hydrology Site Safety Visit	Clarified that the plant grade elevation is at 822 ft msl.	4
HYDSV-12 HYDSV-13	2.4.6	2.4-30	Hydrology Site Safety Visit	Added discussion that landslide and seismic induced waves are note plausible for	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				SCR.	
HYDSV-14	2.4.7	2.4-32	Hydrology Site Safety Visit	Changed the maximum flood elevation. Added a discussion regarding the maximum potential ice thickness and that freezing protection was provided for the ESWS cooling towers and ESW Pump House.	4
HYDSV-16	2.4.11.5	2.4-38	Hydrology Site Safety Visit	Added a discussion regarding the control of the ESWS and CWS cooling towers with makeup flow rates.	4
HYDSV-20	2.4.12.2.4	2.4-46 2.4-47	Hydrology Site Safety Visit	Updated the Groundwater Level Fluctuations to include the 2008 precipitation data and the resulting effect on the groundwater level fluctuations results.	4
HYDSV-20	2.4.12.2.4	2.4-46 2.4-47	Hydrology Site Safety Visit	Removed previous RCOL2_2.4.4.13-4 addition of “undifferentiated fill/regolith and” as well as, “indicating perched groundwater at these locations.”	4
HYDSV-18 HYDSV-24	2.4.12.2.5.1	2.4-49	Hydrology Site Safety Visit	Revised to clarify the conservatism used in porosity to calculate liquid effluent travel times.	4
HYDSV-23	2.4.12.3.1	2.4-51	Hydrology Site Safety Visit	Revised section to describe the post-construction movement o groundwater to support the liquid effluent release model provided in Section 2.4.13.	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
HYDSV-26	2.4.12.4	2.4-53	Hydrology Site Safety Visit	Revised to reflect that a groundwater monitoring program will be developed before fuel load.	4
CTS-00808 HYDSV-30	2.4.13	2.4-54	Hydrology Site Safety Visit	Corrected Figure typo to 2.4.12-209. Discussed the alternate conceptual model and added a reference to new Figures 2.4.12-212-214.	4
HYDSV-28	2.4.13.1	2.4-55	Hydrology Site Safety Visit	Clarified conclusion that no chemical agents could have an effect on the transport characteristics of the liquid effluent.	4
HYDSV-30	2.4.13.2	2.4-55	Hydrology Site Safety Visit	Added clarification regarding the alternate pathways chosen and introduced new Figures 2.4-12-212 through 2.4.12-214 showing the new pathways and cross sections and discussed the hydraulic gradient figures showing the reason why GW movement SE and SW are not plausible release pathways.	4
HYDSV-17 HYDSV-19 HYDSV-23 HYDSV-30	2.4.13.2	2.4-55	Hydrology Site Safety Visit	Added paragraph to introduce new cross section figures and pathway figure.	4
HYDSV-17 HYDSV-19 HYDSV-23 HYDSV-30	2.4.13.2	2.4-55	Hydrology Site Safety Visit	Added two more bullets on what alternate conceptual model parameters were used in developing the site conceptual model plausible pathways.	4
HYDSV-17	2.4.13.3	2.4-55	Hydrology Site	Added a discussion	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
HYDSV-19 HYDSV-23 HYDSV-30			Safety Visit	that rainfall infiltration is not a contributing factor that would affect the liquid effluent release analysis.	
HYDSV-29 HYDSV-31	2.4.13.4	2.4-55	Hydrology Site Safety Visit	Corrected the distances to the nearest water supply wells both in the Glen Rose formation and the Twin Mountains formation.	4
HYDSV-17 HYDSV-19 HYDSV-29 HYDSV-31	2.4.13.4	2.4-61	Hydrology Site Safety Visit	Added a clarification as to why the vertical release pathway is not plausible based upon the Unit 1 and 2 study previously performed.	4
HYDSV-23	2.4.13.4	2.4-61	Hydrology Site Safety Visit	Added reference to new Cross Section figures and pathway Figures 2.4-12-212 through 2.4.12-214.	4
HYDSV-17 HYDSV-19 HYDSV-23 HYDSV-30	2.4.13.5	2.4-55	Hydrology Site Safety Visit	Revised to discuss four release pathways. Revised to include discussion of why alternate pathways moving SE or SW from Units 3 or 4 would not be plausible.	4
HYDSV-17 HYDSV-23 HYDSV-30	2.4.13.5	2.4-55	Hydrology Site Safety Visit	Changed to plausible pathways 3a, 3b, 4a, 4b and changed travel times to SCR, and deleted current pathways. Changed travel times and identified the shortest travel time to SCR. Referred to cross section figures and new pathways.	4
HYDSV-17 HYDSV-23 HYDSV-30	2.4.13.7	2.4-55	Hydrology Site Safety Visit	Revised base mat elevation for A/B and specified subsection	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				for site specific hydrogeologic data and core boring stratigraphy for A/B.	
HYDSV-17 HYDSV-23 HYDSV-30	2.4.13.7	2.4-55	Hydrology Site Safety Visit	Changed travel times for the new pathways, specified what subsection discusses the comparison of U1/2 vertical pathway study, and made minor editorials.	4
HYDSV-05	References 2.4-269 and 2.4-270	2.4-63	Hydrology Site Safety Visit	Added two new references to describe potential reservoir sites considered in the dam failure analysis.	4
HYDSV-15	References 2.4-271 and 2.4-272	2.4-63	Hydrology Site Safety Visit	Added two new references for the ice effects analysis Section 2.4.7.	4
HYDSV-02	Table 2.4.2-204	2.4-87	Hydrology Site Safety Visit	Added the datum elevation for footnote b.	4
HYDSV-06 HDYSV-07	Table 2.4.2-208	2.4-91	Hydrology Site Safety Visit	Changed the tail water elevation.	4
HYDSV-06 HYDSV-07	Table 2.4.3-202	2.4-93	Hydrology Site Safety Visit	Changed the PMP degree storm orientation.	4
HYDSV-06 HYDSV-07	Table 2.4.3-207	2.4-102	Hydrology Site Safety Visit	Changed the watershed sub-basin characteristics.	4
HYDSV-23	Table 2.4.12-211	2.4-149 through 2.4-152	Hydrology Site Safety Visit	Replaced Groundwater and Velocity Times Based Upon Post-Construction Configuration.	4
HYDSV-02	Figures 2.4.2-201 2.4.2-202 2.4.3-202 2.4.3-209 2.4.4-201	--	Hydrology Site Safety Visit	Added horizontal and vertical datums; added additional fetches; clarified watershed boundaries; and	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
	2.4.4-202			added datum sources.	
HYDSV-20	Figure 2.4.12-209	--	Hydrology Site Safety Visit	Replaced the hydrographs for monitoring wells with expanded scale and precipitation data.	4
HYDSV-23	Figures 2.4.12-212 2.4.12-213 2.4.12-214	--	Hydrology Site Safety Visit	Added new Figures for Groundwater Flow Paths for Liquid Effluent Release and Cross Sections	4
RCOL2_02.05.02-07	2.5.2.5	2.5-110	Response to RAI No. 11 Luminant Letter no.TXNB-09035 Date 8/28/2009	Changed 6000 ft/sec to 5800 ft/sec.	-
RCOL2_02.05.02-21	2.5.2.2.1.1	2.5-73	Response to RAI No. 11 Luminant Letter no.TXNB-09035 Date 8/28/2009	Changed Figure 2.5.2-233 to Figure 2.5.2-203.	-
RCOL2_02.05.02-21	2.5.2.4.2.3.2.1	2.5-96-2.5.-97	Response to RAI No. 11 Luminant Letter no.TXNB-09035 Date 8/28/2009	Changed Figure 2.5.-211 to Figure 2.5.1-211.	-
RCOL2_02.05.02-21	Table 2.5.2-208 2.5.2-209	2.5-286 2.5-287	Response to RAI No. 11 Luminant Letter no.TXNB-09035 Date 8/28/2009	Changed data collection date on Table 2.5.2-208 from 2008 to 2007.	-
RCOL2_02.05.02-21	Table	2.5-300	Response to	Added shaded cells in	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
	2.5.2-220		RAI No. 11 Luminant Letter no.TXNB-09035 Date 8/28/2009	Table 2.5.2-220.	
RCOL2_02.05.04-11	2.5.4.5.4.1.2	2.5-179 2.5-228	Response to RAI No. 22 Luminant Letter no.TXNB-09035 Date 8/28/2009	Revised subsection for RAI response.	-
RCOL2_02.05.04-11	2.5.4.5.4.1.2	2.5-243	Response to RAI No. 22 Luminant Letter no.TXNB-09035 Date 8/28/2009	Added references for RAI response.	-
RCOL2_02.05.04-12	2.5.4.5.4.1.2	2.5-179 2.5-228	Response to RAI No. 22 Luminant Letter no.TXNB-09035 Date 8/28/2009	Revised subsection for RAI response.	-
RCOL2_02.05.04-12	2.5.7	2.5-243	Response to RAI No. 22 Luminant Letter no.TXNB-09035 Date 8/28/2009	Added references for RAI response.	-
RCOL2_02.05.01-05	2.5.1.1.3.1	2.5-10	Response to RAI No. 21 Luminant Letter no.TXNB-09035 Date 8/28/2009	Changed southeastern to southwestern.	-
RCOL2_02.05.01-01	2.5.1.1.3.1 2.5.1.1.3.2	2.5-11 2.5-12	Response to RAI No. 14 Luminant Letter no.TXNB-09035	Revised subsection for RAI response.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Date 8/28/2009		
RCOL2_02.05.02-02	2.5.2.2.1.	2.5-72	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.02-06	2.5.2.4.2.3.3.2 2.5.7	2.5-102 2.5-228	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsections for RAI response.	-
RCOL2_02.05.02-08	2.5.2.5 2.5.2.5.1	2.5-109 2.5-110 2.5-111 2.5-167	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.02-08	Figure 2.5.1-221	-	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised Figure 2.5.1-221 for RAI response.	-
RCOL2_02.05.02-11	2.5.2.1	2.5-70	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.02-14	2.5.2.2.4.2.3.1	2.5-93	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.02-18	2.5.2.4	2.5-109	Response to RAI No. 11	Revised subsection for RAI response.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Luminant Letter no.TXNB-09042 Date 9/10/2009		
RCOL2_02.05.02-19	Figure 2.5.2-234	-	Response to RAI No. 11 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised Figure 2.5.2-234 for RAI response.	-
RCOL2_02.05.04-13	2.5.4.5.4.1.1	2.5-178 2.5-179	Response to RAI No. 22 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.04-18	2.5.4.10.5	2.5-192	Response to RAI No. 22 Luminant Letter no.TXNB-09042 Date 9/10/2009	Added references for RAI response.	-
RCOL2_02.05.04-19	Figure 2.5.4-242 Figure 2.5.4-243	-	Response to RAI No. 22 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised Figures 2.5.4-242 and 2.5.4-243 for RAI response.	-
RCOL2_02.05.04-20	2.5.4.5.2 2.5.4.5.4.6.1	2.5-176 2.5-181	Response to RAI No. 22 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.04-21	2.5.4.10.2	2.5-191	Response to RAI No. 22 Luminant Letter no.TXNB-09042	Revised subsection for RAI response.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Date 9/10/2009		
RCOL2_02.05.01-6	2.5.1.1.4.2	2.5-14	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.01-8	2.5.7	2.5-210	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.01-11	2.5.1.1.4.3.6	2.5-26	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.01-15	2.5.1.2.4 2.5.1.2.4.1	2.5-47 2.5-48	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsections for RAI response.	-
RCOL2_02.05.01-15	Figure 2.5.1-220	-	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised Figure 2.5.1-220 for RAI response.	-
RCOL2_02.05.01-16	2.5.1.2.4.2	2.5-48	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.01-16	Figure 2.5.1-217	-	Response to RAI No. 21 Luminant Letter no.TXNB-09042	Revised Figure 2.5.1-217 for RAI response.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			Date 9/10/2009		
RCOL2_02.05.01-17	2.5.1.2.5.1	2.5-51	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.01-17	List of Figures	2-xlvii	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Figures 2.5.1-231 and 2.5.1-232 were added for RAI response.	-
RCOL2_02.05.01-20	Figure 2.5.1-204 Figure 2.5.1-207 Figure 2.5.1-208 Figure 2.5.1-229	-	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised Figure 2.5.1-204, -Figure 2.5-207, Figure 2.5-208, and Figure 2.5-229.	-
RCOL2_02.05.01-20	2.5.7	2.5-228	Response to RAI No. 21 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-
RCOL2_02.05.03-02	2.5.3.2.1	2.5-48 2.5-118	Response to RAI No. 18 Luminant Letter no.TXNB-09042 Date 9/10/2009	Subsection 2.5.3.2.1 added. For RAI response.	-
RCOL2_02.05.03-03	2.5.3.8.2.2	2.5-120	Response to RAI No. 18 Luminant Letter no.TXNB-09042 Date 9/10/2009	Revised subsection for RAI response.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00716	2.1.1.1	2.1-2	Erratum	Change the coordinates of the center of the reactors.	7
CTS-00861	2.1.1.1	2.1-2	Erratum	Add "NAD83" after "Northing and Easting in Texas Mercator North Central State Plane Projection".	7
DCD_15.00.03-25	2.3.4.3 Table2.3-338 (Sheet 1-6 of 6) Table2.3-339 (Sheet 1-2 of 2) Figure 2.3-382	2.3-43 2.3-240 to 2.3-245	Reflect Response to DCD RAI No. 105	Added X/Q values for the Technical Support Center at specified release point.	7
CTS-00464	2.4.1.2.5	2.4-11	Erratum	Corrected the number of existing water wells identified on the CPNPP site and provided a clarifying statement on the well functions.	7
CTS-00464	2.4.12.2.1	2.4-43	Erratum	Corrected the number of existing water wells identified on the CPNPP site and provided a clarifying statement on the well functions.	7
CTS-00464	Table 2.4.12-203 Table 2.4.1-209	2.4-75 2.4-135	Erratum	Updated Tables 2.4.12-203 and Table 2.4.1-209 to list well locations and functions as discussed in Subsections 2.4.1.2.5 and 2.4.12.2.1.	7
CTS-00464	Figure 2.4.1-213	-	Erratum	Updated Figure to show correct well locations.	7
MAP-2.3-001	Table 2.3-338	2.3-240	DCD change	The distances are	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
	(Sheet 1 of 5)		due to US-APWR design revision.	changed by the change of the layout	
MAP-2.0-001	Table 2.3-339	2.3-245	DCD change due to US-APWR design revision.	Control room atmospheric dispersion factors (X/Q) are recalculated.	7

site center point. Detailed information regarding nearby industrial, transportation, and military facilities is presented in Section 2.2.

The CPNPP site lies mainly within the 7.5-minute Hill City Quadrangle but extends into the western portion of the Nemo Quadrangle. The quadrangles that bracket the site area are Tolar, Granbury, Acton, Glen Rose East, Glen Rose West, Chalk Mountain, and Paluxy (Reference 2.1-213).

The nearest population center (as defined by 10 CFR 100.3) to the CPNPP site is Cleburne as the city's population exceeds 25,000 (Reference 2.1-228). Cleburne is located 38.6 km (24.0 mi) east. The closest communities to the CPNPP center point are the cities of Glen Rose located 8.3 km (5.2 mi) southwest and Granbury located 15 km (9.6 mi) north. Granbury is the largest city within a 16-km (10-mi) radius of CPNPP (Figures 2.1-202 and 2.1-203). Granbury has a 2005 estimated population of 7360 while Glen Rose has a population of 2567 (Reference 2.1-228).

Interstate 20, located approximately 45 km (28 mi) northwest, connects the Dallas-Fort Worth Metropolitan area with Abilene. A farm-to-market (FM) road, FM 56, connects the site to U.S. Highway 67 (U.S. 67) and FM 51 (Figure 2.1-202). From Glen Rose, U.S. 67 connects with Cleburne to the east and with Stephenville to the west. FM 51 connects Granbury to Paluxy.

The coordinates of Units 3 and 4 are given below:

Latitude and Longitude NAD83 (degrees/minutes/seconds)

Unit 3	32° 18' 08.9" N	97° 47' 30.1" W
Unit 4	32° 18' 07.5" N	97° 47' 41.8" W

Northing and Easting in Texas Mercator North Central State Plane Projection NAD83 (ft) CTS-00861

	Northing	Easting
Unit 3	6793728	2187352
Unit 4	6793577	2186348

Universal Transverse Mercator Zone 14 NAD83 (Meters)

	Northing	Easting
Unit 3	~~613759~~357406	~~3574606~~613759

CTS-00716

	Northing	Easting	
Unit 4	~~6134533~~574559	~~3574559~~613453	CTS-00716

2.1.1.2 Site Area Map

The proposed reactors, auxiliary buildings, turbine buildings, and cooling towers are labeled in Figure 2.1-201. A railroad spur enters the site, but there are no other transportation facilities, commercial, institutional, recreational, or residential structures within the site. The CPNPP site boundary is boldly outlined, and the highways and railroads located within the vicinity are shown in Figure 2.1-202. The site boundary is the same as the property boundary and the restricted area. The CPNPP Units 3 and 4 exclusion area boundary (EAB) extends 0.5 mi from each reactor center point. The total area contained by the site boundary is approximately 3220 ha (7950 ac) of land. Figure 2.1-204 is a U.S. Geological Survey topographic map that shows prominent natural and manmade features. Figure 2.1-205 illustrates the distances from the effluent release boundary (the boundary on which limits for the release of radioactive effluents are based) to the EAB in each of the 22.5-degree segments centered on the 16 cardinal compass points.

2.1.2 Exclusion Area Authority and Control

CP COL 2.1(1) Replace the content of DCD Subsection 2.1.2 with the following.

The property is clearly posted with “no trespassing” signs and all road access points are controlled. The road accessing Squaw Creek is controlled by fences and gates with security codes. The road to the power plant is controlled, once inside the EAB, with security check-points and barriers. The site’s physical security plan contains information on actions to be taken by security force personnel in the event of unauthorized persons crossing the EAB. The population distribution within 0.8 km (0.5 mi) of each reactor center point is zero.

2.1.2.1 Authority

All of the land and water inside the exclusion area is owned and controlled by Luminant, and is in the custody of Luminant. Additionally, Luminant controls all activities within the EAB including exclusion and removal of personnel and property from the area. Some subsurface mineral rights on the CPNPP site are not owned by Luminant; however, deed restrictions prevent mineral owners within the perimeter of the EAB but outside of the confines of SCR from placing vertical drilling rigs below the 240-m (800-ft) contour line. Luminant has absolute authority to control ingress rights for mineral rights exploration in the site. A 26-in crude oil pipeline operated by Sunoco Pipeline L.P. traverses the exclusion area approximately 2275 ft west-southwest of the center point as shown on Figure 2.2-204. This pipeline is also described in Subsection 2.2.2.3. Luminant has granted the pipeline owners easements that retain for Luminant absolute

values. A comparison of the site specific χ/Q values with the DCD χ/Q values is provided in Table 2.3-337.

2.3.4.3 Relative Concentration Estimates at the Main Control Room and Technical Support Center Emergency Intake

DCD_15.00.03-25

The atmospheric dispersion estimates for the CPNPP control room were calculated based on the guidance provided in Regulatory Guide 1.194. The main control room and Technical Support Center (TSC) χ/Qs were calculated for all probable release points to the control room air intakes using the ARCON96 computer code (NUREG/CR-6331) based on the hourly meteorological data collected for the years 2001 through 2004 and 2006. The locations of the assumed release points and location of the control room and TSC intakes are shown on Figure 2.3-382. In all cases, the intervening structures between the release point and the control room and TSC intake were ignored for calculational simplicity, thereby underestimating the true distance to the control room and TSC intakes. Atmospheric stability was determined by the vertical temperature difference (ΔT) measured over the difference in measurement height and the stability classes given in Regulatory Guide 1.23. All releases were assumed to be point ground-level releases, except the containment shell, which is assumed to be a diffuse area source. For each of the source-to-receptor combinations (Table 2.3-338), the χ/Q value that is not exceeded more than 5.0 percent of the total hours in the meteorological data set (e.g., 95-percentile χ/Q) was determined. The χ/Q values for source-receptor pairs are shown in Table 2.3-339.

DCD_15.00.03-25

DCD_15.00.03-25

DCD_15.00.03-25

2.3.4.4 Hazardous Material Releases

Hazardous material releases and control room habitability are discussed in Section 6.4. The methodology used to calculate concentrations of hazardous materials (e.g., flammable or toxic clouds) outside building structures resulting from the on-site and/or off-site airborne releases of such materials is also presented in this subsection. Conformance with the requirements of Regulatory Guide 1.78 is also given in this subsection.

2.3.4.5 Representativeness and Topographic Effects

As discussed in above, the on-site data are considered to be conservatively representative of meteorological conditions at the site. Topographic effects at the site were discussed in Subsection 2.3.2.2.3. The results were indicative of a flat terrain, with no appreciable effects on short-term diffusion estimates.

2.3.5 Long-Term Atmospheric Dispersion Estimates for Routine Releases

2.3.5.1 Objective

CP COL 2.3(3) Replace the content of DCD Subsection 2.3.5.1 with the following.

CP COL 2.3(2)

Table 2.3-338 (Sheet 1 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Main Control Room/Class 1E Electrical Room East HVAC Intake Distances and Directions

MAP-2.3-001

Release Point	Distance (m)	Direction to Source (°)
Plant Vent	~~63.1~~66.1	~~308.5~~307.5°
Main Steam Line	~~16.8~~17.1	~~247.5~~243.5°
Fuel Handling Area	75.9	~~351.5~~353.5°
Relief Valves	27.4	290.5°
Safety Valves	24.1	268.5°
Containment Shell	26.8	311.5°

MAP-2.3-001

Main Control Room/Class 1E Electrical Room West HVAC Intake Distances and Directions

MAP-2.3-001

Release Point	Distance (m)	Direction to Source (°)
Plant Vent	~~50.3~~50.9	~~15.5~~11.5°
Main Steam Line	24.7	~~84.5~~86.5°
Fuel Handling Area	~~100.0~~101.8	~~32.5~~33.5°
Relief Valves	27.4	52.5°
Safety Valves	24.1	74.5°
Containment Shell	26.8	31.5°

MAP-2.3-001

Above Grade Elevations of the Main Control Room and Class 1E Electrical Room HVAC Intakes

Receptor	~~Lower~~ Elevation (m)	~~Upper Elevation (m)~~
Control Room HVAC Intake	~~14.3~~13.9	~~17.1~~
Class 1E Electrical Room HVAC Intake	~~14.3~~13.9	~~16.2~~

CP COL 2.3(2)

Table 2.3-338 (Sheet 2 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Release Point	Distance (m)	Direction to Source (°)
Plant Vent	55.5	73°
Main Steam Line	70.1	109°
Fuel Handling Area	111.9	63°
Relief Valves	62.5	89°
Safety Valves	63.4	94°
Containment Shell	46.3	83°

CP COL 2.3(2)

Table 2.3-338 (Sheet 3 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Table 1 MCR Habitability Analysis Data for MSLB Analysis

Accidents	MSLB			
Sources	Steam Line Break Releases		PORV and Safety Valve Release	
Receptors	Intake Switchgear Room HVAC Intake	Inleak Switchgear Room HVAC Intake	Intake Switchgear Room HVAC Intake	Inleak Switchgear Room HVAC Intake
Horizontal Distance (m)	17	17	24	24
Vertical Distance (m)	0	0	22	22

Table 2 MCR Habitability Analysis Data for Locked Rotor Accident Analysis

Accidents	Locked Rotor Accident	
Sources	PORV and Safety Valve Release	
Receptors	Intake Switchgear Room HVAC Intake	Inleak Switchgear Room HVAC Intake
Horizontal Distance (m)	24	24
Vertical Distance (m)	22	22

CP COL 2.3(2)

Table 2.3-338 (Sheet 4 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Table 3 MCR Habitability Analysis Data for RCCA Ejection Accident Analysis

Accidents	RCCA Ejection Accident			
Sources	Plant Vent		Ground Level Containment Release Point	
Receptors	Intake	Inleak	Intake	Inleak
	Control Room HVAC Intake	Auxiliary Intake	Control Room HVAC Intake	Auxiliary Intake
Horizontal Distance (m)	56	41	32	30
Vertical Distance (m)	52	46	32	26

Accidents	RCCA Ejection Accident	
Sources	PORV and Safety Valve Release	
Receptors	Intake	Inleak
	Switchgear Room HVAC Intake	Switchgear Room HVAC Intake
Horizontal Distance (m)	24	24
Vertical Distance (m)	22	22

CP COL 2.3(2)

Table 2.3-338 (Sheet 5 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Table 4 MCR Habitability Analysis Data for Small Line Break and SGTR Analyses

Accidents	Small Line Break		SGTR	
Sources	Plant Vent		PORV and Safety Valve Release	
Receptors	Intake	Inleak	Intake	Inleak
	Control Room HVAC Intake	Auxiliary Building HVAC Intake	Switchgear Room HVAC Intake	Switchgear Room HVAC Intake
Horizontal Distance (m)	56	41	24	24
Vertical Distance (m)	52	46	22	22

Table 5 MCR Habitability Analysis Data for LOCA Analysis

Accidents	LOCA			
Sources	Plant Vent		Ground Level Containment Release Point	
Receptors	Intake	Inleak	Intake	Inleak
	Control Room HVAC Intake	Reactor Building Door	Control Room HVAC Intake	Switchgear Room HVAC Intake
Horizontal Distance (m)	56	37	32	27
Vertical Distance (m)	52	60	32	33

CP COL 2.3(2)

Table 2.3-338 (Sheet 6 of 6)
Main Control Room and TSC HVAC Intake Distances and Directions

DCD_15.00.03-25

Table 6 MCR Habitability Analysis Data for Fuel Handling Accident Analysis

Accidents	FHA in the Containment		FHA in the Fuel Handling Building	
Sources	Plant Vent		Fuel Handling Area	
Receptors	Intake Control Room HVAC Intake	Inleak Auxiliary Building HVAC Intake	Intake Control Room HVAC Intake	Inleak Switchgear Room HVAC Intake
Horizontal Distance (m)	56	41	82	76
Vertical Distance (m)	52	46	8.5	10

Note:

The sampling system line, air lock and equipment hatch release locations (sources) listed in the DCD (Figure 15A-1) are not considered above because they are interior to the Auxiliary Building. Likewise, the Reactor Building Door is not evaluated because it is an interior door. The Auxiliary Building intake location is not specifically evaluated because this pathway is bounded by the main control room HVAC pathway.

Table 2.3-339 (Sheet 1 of 2)
Main Control Room and TSC Atmospheric Dispersion Factors (χ/Q) for Accident Dose Analysis

DCD_15.00.03-25

CP COL 2.3(2)

Main Control Room χ/Q (s/m^3) at the East HVAC Intake

MAP-2.0-001

Time Interval	Plant Vent	Main Steam Line	Fuel Handling Area
0 – 2 hours	~~6.9E-04~~6.3E-04	~~1.5E-02~~1.6E-02	9.6E-04
2 – 8 hours	~~4.4E-04~~4.1E-04	~~7.7E-03~~8.3E-03	7.5E-04
8 – 24 hours	~~1.8E-04~~1.7E-04	~~3.2E-03~~3.5E-03	3.1E-04
1 – 4 days	~~1.2E-04~~1.1E-04	~~2.4E-03~~2.5E-03	2.0E-04
4 – 30 days	~~9.8E-05~~9.0E-05	~~1.6E-03~~1.7E-03	1.7E-04

MAP-2.0-001

Time Interval	Main Steam Relief Valves	Main Steam Safety Valves	Containment Shell
0 – 2 hours	~~3.1E-03~~2.9E-03	~~3.6E-03~~3.3E-03	~~8.0E-04~~7.5E-04
2 – 8 hours	~~1.8E-03~~1.7E-03	~~2.0E-03~~1.9E-03	~~5.2E-04~~5.1E-04
8 – 24 hours	~~7.3E-04~~6.9E-04	~~8.3E-04~~7.6E-04	~~2.3E-04~~2.2E-04
1 – 4 days	~~5.3~~4.9E-04	~~6.1~~5.4E-04	1.4E-04
4 – 30 days	~~4.2E-04~~3.9E-04	~~4.2E-04~~3.8E-04	1.2E-0~~5~~4

MAP-2.0-001

Main Control Room and TSC Atmospheric Dispersion Factors (χ/Q) for Accident Dose Analysis

Main Control Room χ/Q (s/m^3) at the West HVAC Intake

MAP-2.0-001

Time Interval	Plant Vent	Main Steam Line	Fuel Handling Area
0 – 2 hours	~~1.0E-03~~9.4E-04	~~7.2E-03~~6.6E-03	~~5.7E-04~~5.4E-04
2 – 8 hours	~~7.6E-04~~7.3E-04	~~4.5E-03~~4.3E-03	~~4.3E-04~~4.1E-04
8 – 24 hours	~~3.2E-04~~3.1E-04	~~1.9E-03~~1.8E-03	~~1.8E-04~~1.7E-04
1 – 4 days	~~2.0E-04~~1.9E-04	~~1.4E-03~~1.3E-03	1.1E-04
4 – 30 days	~~1.7E-04~~1.6E-04	~~9.4E-04~~8.9E-04	~~8.0E-05~~7.8E-05

MAP-2.0-001

Time Interval	Main Steam Relief Valves	Main Steam Safety Valves	Containment Shell
0 – 2 hours	~~3.7E-03~~3.4E-03	~~4.6E-03~~4.1E-03	~~9.1E-04~~8.7E-04
2 – 8 hours	~~2.7E-03~~2.4E-03	~~3.0E-03~~2.7E-03	~~6.4E-04~~6.1E-04
8 – 24 hours	~~1.1E-03~~9.9E-04	~~1.2E-03~~1.1E-03	~~2.9E-04~~2.7E-04
1 – 4 days	~~7.2E-04~~6.6E-04	~~8.9E-04~~8.1E-04	~~1.8E-04~~1.7E-04
4 – 30 days	~~4.9E-04~~4.5E-04	~~5.6E-04~~5.1E-04	1.4E-04

Table 2.3-339 (Sheet 2 of 2)
Main Control Room and TSC Atmospheric Dispersion Factors (χ/Q) for Accident Dose Analysis

DCD_15.00.03-25

CP COL 2.3(2)

DCD_15.00.03-25

TSC χ/Q (s/m^3) at the TSC HVAC Intake			
Time Interval	Plant Vent	Main Steam Line	Fuel Handling Area
0 – 2 hours	1.1E-03	1.3E-03	4.4E-04
2 – 8 hours	6.9E-04	9.6E-04	2.8E-04
8 – 24 hours	2.8E-04	3.9E-04	1.1E-04
1 – 4 days	2.1E-04	3.2E-04	8.5E-05
4 – 30 days	1.3E-04	2.4E-04	5.0E-05

Time Interval	Main Steam Relief Valves	Main Steam Safety Valves	Containment Shell
0 – 2 hours	1.3E-03	1.3E-03	8.0-E-04
2 – 8 hours	9.3E-03	9.6E-03	5.1E-04
8 – 24 hours	3.8E-04	3.9E-04	2.3E-04
1 – 4 days	2.7E-04	2.7E-04	1.6E-04
4 – 30 days	1.9E-04	2.0E-04	1.1E-04

DCD_15.00
.03-25

⬡ SOURCES
1. Containment Shell to Class 1E electrical room HVAC intake (As Diffuse Area Source)
2. Containment Shell to MainControl Room HVAC Intake and Class 1E electrical room HVAC intake (As Diffuse Area Source)
3. Containment Shell to Auxiliary Building HVAC Intake and technical support center HVAC Intake (As Diffuse Area Source)
4. Containment Shell to Reactor Building Door (As Diffuse Area Source)
5. Main Steam Line (Source points are in the west and the east.)
6. Main Relief Valve (Source points are in the west and the east.)
7. Main Safety Valve (Source points are in the west and the east.)
8. Fuel Handling Area
9. Plant Vent

△ RECEPTORS
a. Main Control Room HVAC Intake
b. Reactor Building Door
c. Auxiliary Building HVAC Intake and Technical Support Center HVAC Intake
d. Class 1E electrical room HVAC intake

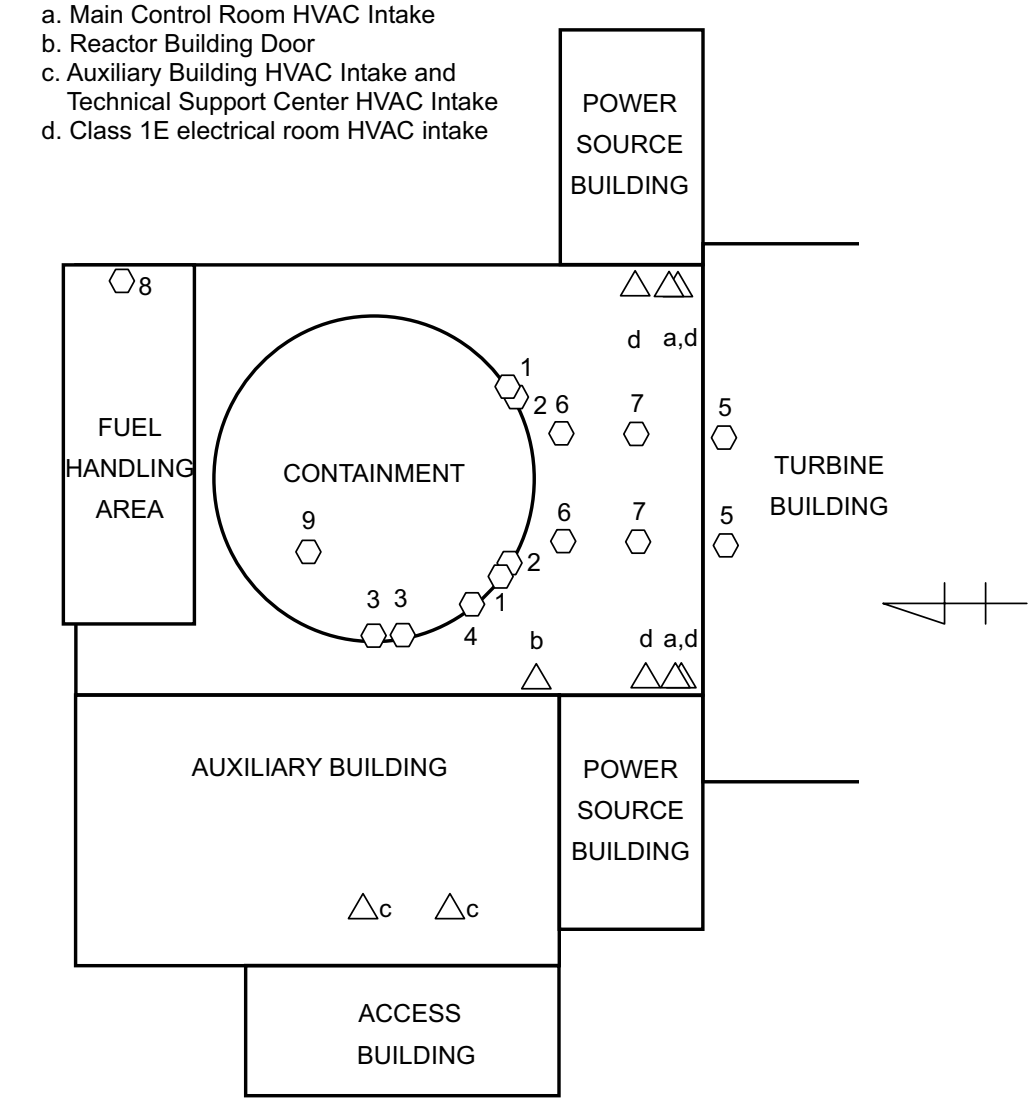


Figure 2.3-382 Control Room Release and Receptor Locations

The portion of the Brazos River catchment between Possum Kingdom Lake and Lake Whitney encompasses portions of Palo Pinto, Parker, Hood, Somervell, Bosque, and Hill counties. Surface water use estimates for users with allocated water rights of 500 ac-ft or more in these counties were obtained from the Texas Commission on Environmental Quality (TCEQ). The 2006 monthly withdrawal data for users in this area are provided in Table 2.4.1-208, and the locations of major water rights in the Brazos River Basin are shown on Figure 2.4.1-212.

In Palo Pinto County in 2006, the BRA reported diversions from the Brazos River, Possum Kingdom Lake area, of 160,311 ac-ft for municipal, hydroelectric, mining, irrigation, industrial, and other uses. Also in Palo Pinto County, the Palo Pinto Municipal Water District reported a diversion from Palo Pinto Creek, Lake Palo Pinto area, of 4800 ac-ft for municipal use, and the Rocking W. Ranch reported a diversion of 647 ac-ft from the Brazos River for irrigation use.

In Parker County, the City of Mineral Wells reported a diversion of 54 ac-ft from Rock Creek, Lake Mineral Wells area, for municipal use. No diversion amount was reported in 2006 by the TXI Operations company for industrial and irrigation use.

In Hood County, the BRA reported diversions of 56,815 ac-ft from the Brazos River, Lake Granbury area, for municipal, industrial, irrigation, and mining uses.

In Somervell County, a diversion of 3,367,805 ac-ft was reported from SCR, Panther Branch, and Lake Granbury. This total includes diversion from Lake Granbury as well as circulation water estimates through the once through cooling system for CPNPP Units 1 and 2. In 2006, no diversion amount from the Paluxy River was reported by the Somervell County Water District for municipal use.

In Bosque County in 2006, Chisholm Trails Adventures reported a diversion of 3621 ac-ft from the Brazos River, downstream of Lake Granbury, for irrigation use. The cities of Meridian and Clifton were identified as having significant water rights in Bosque County; however, diversions for these municipalities are on the North Bosque River and cannot affect or be impacted by CPNPP operations.

In Hill County, the BRA reported diversions of 7302 ac-ft from the Brazos River, Lake Whitney area, for municipal and industrial uses.

2.4.1.2.5 Groundwater Use

~~Eleven~~Twelve existing water wells were identified on the CPNPP site. ~~The wells include: six potable water wells that support CPNPP Units 1 and 2 operations; four observation wells, one of which was identified as a converted domestic well; and one privately owned stock well.~~The wells include seven active potable water wells that support CPNPP Units 1 and 2 operations, one inactive potable water well associated with Squaw Creek Park, and four observation wells. Information regarding these wells is provided in Table 2.4.1-209, and the well locations are shown on Figure 2.4.1-213. On-site groundwater withdrawal information for 2006 was obtained from an annual report provided by Luminant. The report indicated

CTS-00464

for Hood and Somervell counties is the Trinity aquifer in which a majority is obtained from the Twin Mountains Formation. Groundwater well information obtained from the TWDB indicated a total of 394 wells in the 2-county area (Reference 2.4-258). Of the 394 wells listed, 43 were listed as unused, and no use was given for nine of the wells. Information regarding these wells is provided in Table 2.4.12-201. The well locations, use category, and recharge area are shown on Figure 2.4.12-205. A review of the well database indicated that of the 342 wells with identified uses, 52 percent were for public supply use, 27 percent were for domestic use, 8 percent were for industrial use, 7 percent were for livestock use, and 6 percent were for irrigation use.

The estimated 2003 groundwater withdrawal in Somervell County was 1726 ac-ft, which is approximately 1.00 percent of the total withdrawals from the Trinity aquifer. Approximately 55 percent of this monthly withdrawal was for municipal use, 41 percent was for mining use, 2 percent was for steam electric use, 2 percent was for livestock use, and less than 1 percent was for manufacturing use. Table 2.4.12-202 shows 2003 groundwater withdrawals by use category for Hood and Somervell counties (Reference 2.4-257).

The estimated 2003 groundwater withdrawal in Hood County was 5729 ac-ft, which is approximately 3.33 percent of the total withdrawals from the Trinity aquifer. Approximately 91 percent of this withdrawal was for municipal use, 5 percent was for livestock use, 3 percent was for mining use, and less than 1 percent was for steam electric use (Reference 2.4-257).

~~Eleven~~Twelve existing water wells were identified on the CPNPP site. ~~The wells include: seven potable water wells that support CPNPP Units 1 and 2 operations and four observation wells, one of which was identified as a converted domestic well.~~The wells include seven inactive potable water wells that support CPNPP Units 1 and 2 operations, one inactive potable water well associated with Squaw Creek Park, and four observation wells. Two of these wells use vertical centrifugal pumps and five wells use submersible pumps. Information regarding these wells is provided in Table 2.4.12-203, and the well locations are shown on Figure 2.4.12-206. On-site groundwater withdrawal information for 2006 was obtained from an annual report prepared by Luminant (Reference 2.4-217). The report indicated on-site withdrawals of 27.90 ac-ft (9,092,700 gal) from five active wells in 2006, which is a use rate of 24,911.5 gallons per day (gpd) or approximately 17.3 gallons per minute (gpm). Monthly use data for 2006 is provided in Table 2.4.12-204. CTS-00464

Luminant is not anticipating using groundwater as an operational or safety-related source of water for CPNPP Units 3 and 4, and has implemented a conservation plan for future groundwater withdrawals at the CPNPP site. See Subsection 2.4.1.2.5 for additional information regarding existing water wells at the CPNPP site.

CP COL 2.4(1)

Table 2.4.12-203
CPNPP Water Well Information

CTS-00464

Well Number (2006)	Self Supplied (Gallons)	Primary Use	Well Depth	Aquifer	Latitude	Longitude	County	Well Type
3242903	Texas Utilities	Not Used	479	Twin Mountains (Trinity)	321651	974623	Somervell	Observation
3242902	Texas Utilities	Not Used	318	Twin Mountains (Trinity)	321709	974513	Somervell	Observation
3242901	Texas Utilities	Public Supply	350	Twin Mountains (Trinity)	321714	974522	Somervell	Withdrawal of Water
3242601	Texas Utilities	Public Supply	466	Twin Mountains (Trinity)	321745	974723	Somervell	Withdrawal of Water
3242602	Texas Utilities	Public Supply	490	Twin Mountains (Trinity)	321751	974649	Somervell	Withdrawal of Water
3242502	JC Ice/Texas Utilities	Not Used	352	Twin Mountains (Trinity)	321807	974853	Somervell	Observation
3242503	Texas Utilities	Public Supply	517	Twin Mountains (Trinity)	321802	974826	Somervell	Withdrawal of Water
3242504	Texas Utilities	Public Supply	400	Twin Mountains (Trinity)	321802	974822	Somervell	Withdrawal of Water
3242603	Texas Utilities	Public Supply	471	Twin Mountains (Trinity)	321858	974656	Somervell	Withdrawal of Water
32425	Texas Utilities	Public Supply	485	Twin Mountains (Trinity)	321713	974706	Somervell	Withdrawal of Water
3242604	Texas Utilities	Not Used	470	Twin Mountains (Trinity)	321910	974655	Hood	Observation

Source: Reference 2.4-258

Table 2.4.12-203
CPNPP Water Well Information

CTS-00464

CPNPP Well ID	State Well Number	Location	Primary Use	Well Depth (ft)	Latitude	Longitude	Well Type
1	3242903	Ball Bark Road	Not Used	479	321651	974623	Observation
2	3242902	Training Center	Not Used	318	321707	974515	Observation
3	3242901	Training Center	Public Supply	350	321707	974516	Withdrawal of Water
4	3242601	Batch Plant	Public Supply	466	321748	974733	Withdrawal of Water
5	3242602	Met Tower	Public Supply	490	321750	974650	Withdrawal of Water
6	N/A	Plant Entrance	Not Used	>280(1)	321749	974859	Observation
7	3242503	NOSF - North	Public Supply	517	321760	974828	Withdrawal of Water
8	3242504	NOSF - South	Public Supply	400	321757	974826	Withdrawal of Water
9	3242603	Squaw Creek Park	Public Supply	471	321905	974659	Withdrawal of Water
10	3242604	Squaw Creeak Park	Not Used	470	321905	974660	Observation
11	N/A	Squaw Creek Park Office	Public Supply	Unknown(2)	321946	974648	Withdrawal of Water
12	N/A	Rifle Training Facility	Public Supply	485	321905	974659	Withdrawal of Water

Notes:

Onsite water wells are owned by Luminant and completed in the Twin Mountains (Trinity) Aquifer
(1) Total depth of well is unknown due to obstruction. Static water level has been measured at approximately 280 ft below top of casing.
(2) Inactive public supply well, total depth of well is unknown.
NOSF Nuclear Operations Support Facility
N/A Not Assigned

CP COL 2.4(1)

Table 2.4.1-209
CPNPP Water Well Information

CTS-00464

Well Number (2006)	Owner	Primary Use	Well Depth (ft)	Aquifer	Latitude	Longitude	County	Well Type
3242903	Texas Utilities	Not Used	479	Twin Mountains (Trinity)	321651	974623	Somervell	Observation
3242902	Texas Utilities	Not Used	318	Twin Mountains (Trinity)	321709	974513	Somervell	Observation
3242901	Texas Utilities	Public Supply	350	Twin Mountains (Trinity)	321714	974522	Somervell	Withdrawal of Water
3242601	Texas Utilities	Public Supply	466	Twin Mountains (Trinity)	321745	974723	Somervell	Withdrawal of Water
3242602	Texas Utilities	Public Supply	490	Twin Mountains (Trinity)	321751	974649	Somervell	Withdrawal of Water
3242502	JC Ice/Texas Utilities	Not Used	352	Twin Mountains (Trinity)	321807	974853	Hood	Observation
3242503	Texas Utilities	Public Supply	517	Twin Mountains (Trinity)	321802	974826	Somervell	Withdrawal of Water
3242504	Texas Utilities	Public Supply	400	Twin Mountains (Trinity)	321802	974822	Somervell	Withdrawal of Water
3242603	Texas Utilities	Public Supply	471	Twin Mountains (Trinity)	321858	974656	Somervell	Withdrawal of Water
32425	Texas Utilities	Public Supply	485	Twin Mountains (Trinity)	321713	974706	Somervell	Withdrawal of Water
3242604	Texas Utilities	Not Used	470	Twin Mountains (Trinity)	321910	974655	Hood	Observation

Source: Texas Water Development Board Website: Welldata from TWDB Groundwater Database Link: http://www.twdb.state.tx.us/mapping/gisdata.asp

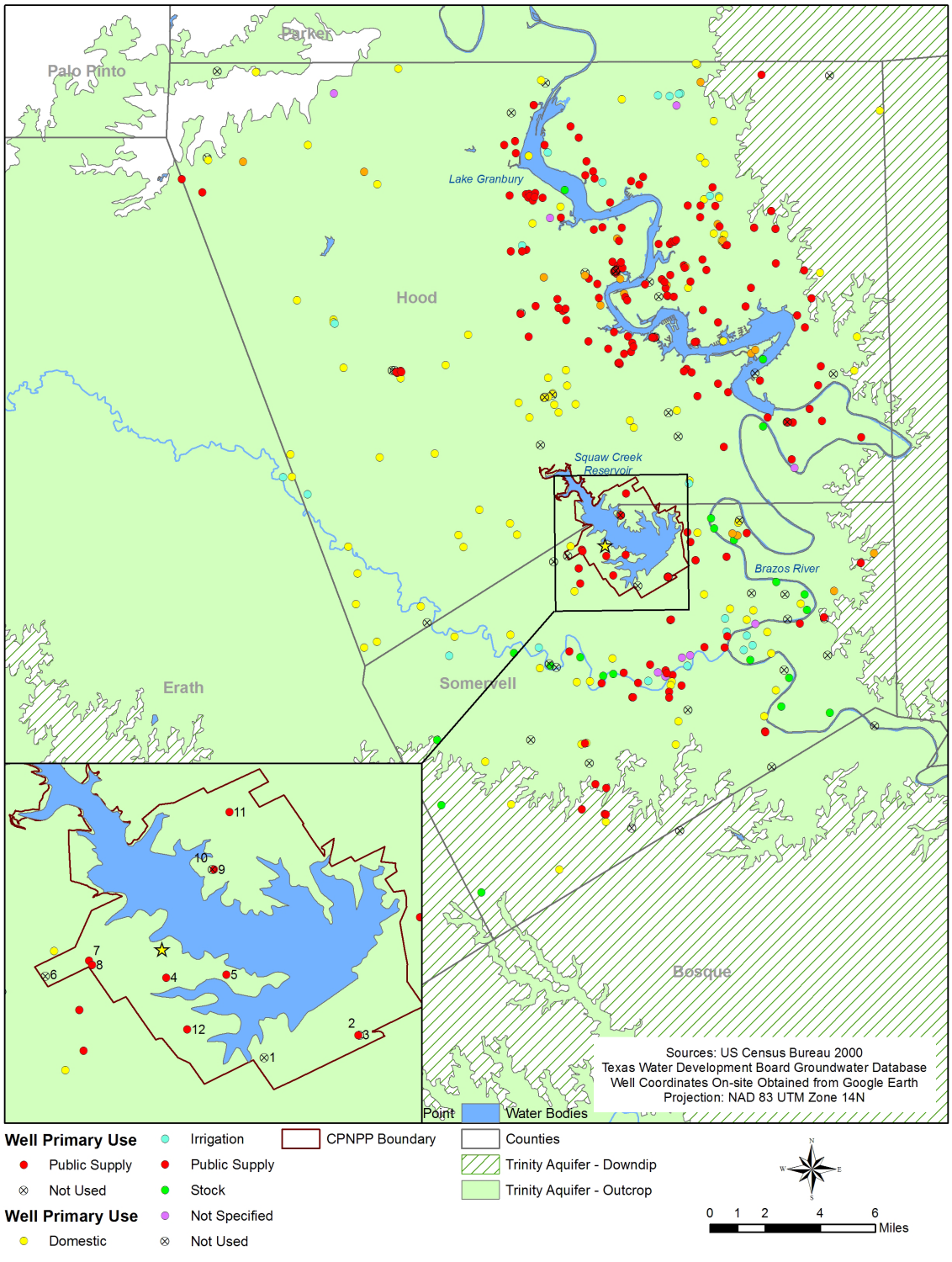
Table 2.4.1-209
CPNPP Water Well Information

CTS-00464

CPNPP Well ID	State Well Number	Location	Primary Use	Well Depth (ft)	Latitude	Longitude	Well Type
1	3242903	Ball Bark Road	Not Used	479	321651	974623	Observation
2	3242902	Training Center	Not Used	318	321707	974515	Observation
3	3242901	Training Center	Public Supply	350	321707	974516	Withdrawal of Water
4	3242601	Batch Plant	Public Supply	466	321748	974733	Withdrawal of Water
5	3242602	Met Tower	Public Supply	490	321750	974650	Withdrawal of Water
6	N/A	Plant Entrance	Not Used	>280(1)	321749	974859	Observation
7	3242503	NOSF - North	Public Supply	517	321760	974828	Withdrawal of Water
8	3242504	NOSF - South	Public Supply	400	321757	974826	Withdrawal of Water
9	3242603	Squaw Creek Park	Public Supply	471	321905	974659	Withdrawal of Water
10	3242604	Squaw Creeak Park	Not Used	470	321905	974660	Observation
11	N/A	Squaw Creek Park Office	Public Supply	Unknown(2)	321946	974648	Withdrawal of Water
12	N/A	Rifle Training Facility	Public Supply	485	321905	974659	Withdrawal of Water

Notes:

Onsite water wells are owned by Luminant and completed in the Twin Mountains (Trinity) Aquifer
(1) Total depth of well is unknown due to obstruction. Static water level has been measured at approximately 280 ft below top of casing.
(2) Inactive public supply well, total depth of well is unknown.
NOSF Nuclear Operations Support Facility
N/A Not Assigned



CTS-00464

CTS-00464

Figure 2.4.1-213 CPNPP Site and Site Vicinity Water Wells

Chapter 3

Chapter 3 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00638	3.3.1.2	3.3-1	Clarification	Add “CPNPP Units 3 and 4 do not have site-specific seismic category II buildings and structures”.	0
CTS-00600	3.7.1	3.7-3	Editorial correction	Change “is” to “has been”.	0
MAP-03-001	3.7.4.2 3.7.5	3.7-12 3.7-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.7(15)	0
MAP-03-002	3.7.4.5 3.7.5	3.7-12 3.7-13 3.7-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.7(18)	0
CTS-00532	Table 3.7.2-1R	3.7-17 3.7-18	Editorial correction	Revise LMN to highlight changes.	0
MAP-03-003	3.8.1.4.1.3 3.8.6	3.8-1 3.8-13 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(1)	0
MAP-03-004	3.8.1.5.1.2 3.8.1.5.2.2 3.8.6	3.8-1 3.8-1 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(2)	0
CTS-00602	3.8.1	3.8-2	Clarification	Change “Chapter 2” to “Subsection 2.5.4”.	0
MAP-03-005	3.8.1.6 3.8.6	3.8-2 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(4)	0
MAP-03-006	3.8.1.6 3.8.6	3.8-2 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(5)	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-03-007	3.8.1.6 3.8.6	3.8-2 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(6)	0
MAP-03-008	3.8.1.6 3.8.6	3.8-3 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(8)	0
MAP-03-009	3.8.1.6 3.8.6	3.8-3 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(9)	0
MAP-03-010	3.8.1.6 3.8.6	3.8-3 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(12)	0
MAP-03-011	3.8.1.6 3.8.6	3.8-3 3.8-14	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.8(13)	0
CTS-00607	3.8.4.1.3.2	3.8-6 3.8-7	Editorial correction	Change “the ESW pump houses” to “UHS ESW pump house”.	0
MAP-03-012	3.8.4.7	3.8-11	Revision of COL 3.8(22) Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Change “Monitoring of seismic category I structures is required to be performed” to “a site-specific program for monitoring and maintenance of seismic category I structures is performed”.	0
CTS-00603	Table 3.9-202	3.8-18	Consistent with DCD Rev.1	Change unit and number in the table.	0
CTS-00604	3.9.3.4.2.5	3.9-2	Editorial correction	Clarify wording.	0
CTS-00531	3.9.3.4.2.5	3.9-2	Editorial correction	Change “are” to “is”.	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00605	Table 3.9-201	3.9-5	Editorial correction	Change COL item number.	0
MAP-03-014	3.10 3.10.7	3.10-1 3.10-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.10(10)	0
CTS-00606	3.11	3.11-1	Clarification	Replace EQ program implementation dates with milestones.	0
CTS-00639	3.11.5	3.11.3	Editorial correction	Change “Table 3D-201 by completion of [Later]” to “the Equipment EQ Technical Report (Reference 3.11.3)”.	0
MAP-03-015	3.13.1.2.3 3.13.3	3.13-1 3.13-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.13(1)	0
MAP-03-016	3.13.1.2.5 3.13.3	3.13-1 3.13-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 3.13(2)	0
DCD_3.5.1.1-04	3.5	3.5-1 3.5-4	Reflect Response to DCD RAI No. 127	Change section number and title	3
RCOL2_03.05.01.03-1	3.5.1.3.2	3.5-2	Response to RAI No. 12 Luminant Letter no.TXNB-09033 Date 08/24/2009	Inserted a description of turbine valve test frequency.	-
RCOL2_10.04.08-1	Table 3.2-201	3.2-5	Response to RAI No. 17 Luminant Letter no.TXNB-09034 Date 08/24/2009	For Item #4 under the “System and Components” column for the Startup steam generator (SG) blowdown system, correct the information for the Equipment Class, location, Quality Group, Codes and Standards, and Seismic	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				Category. In addition, modify Note 1.	
DCD_03.02.01-6	3.2.1	3.2-5	Reflect Response to DCD RAI No. 287	Change the description of note and add note.	4
CTS-00804	3.2.1	3.2-5	Editorial correction	Left-justify first column	4
RCOL2_03.10-02	3.10	3.10-1	Revision of COL 3.10(3) Response to RAI No. 25 Luminant Letter no.TXNB-09047 Date 09/22/2009	Change "As part of the …testing phase."to "The file…Table 13.4-201."	-
RCOL2_03.10-01	3.10.4.1	3.10-2	Revision of COL 3.10(1) Response to RAI No. 25 Luminant Letter no.TXNB-09047 Date 09/22/2009	Change "The plan for…by December 2008."to "Technical Report MUAP-08015…during plant operation."	-
RCOL2_03.06.02-01	3.6.1.3	3.6-1	Revision of COL 3.6(1) Response to RAI No. 27 Luminant Letter no.TXNB-09047 Date 09/22/2009	Change "There is no site specific…to safely shut down the plant."to "The site-specific systems…to safely shut down the plant."	-
MAP-03-017	3.6.2.1	3.6-1	Revision of COL 3.6(4) consistent with DCD Rev.2	Revise description to clearly state that the failure of site-specific moderate energy piping does not affect safety function.	6
MAP-03-018	3.6.2.5 3.6.4	3.6-2	Consistent with DCD Rev.2	Delete COL 3.6(6)	6

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-03-019	3.7.2.3.4 3.7.5	3.7-7 3.7-14	Consistent with DCD Rev.2	Delete COL 3.7(11)	6
MAP-03-020	3.7.2.8	3.7-10	Revision of COL 3.7(9) consistent with DCD Rev.2	Identify the potential impact of the non-seismic Category I structures on the site-specific Category I structures.	6
MAP-03-021	3.7.4.6	3.7-13	Consistent with DCD Rev.2	Change "implementation plan" to "program"	6
MAP-03-023	3.8.1.7	3.8-3	Clarification in DCD Rev.2	Delete "site specific"	6
MAP-03-024	3.9.6	3.9-2	Revision of COL 3.9(8) consistent with DCD Rev.2	Change sentences to address the COL item with a more precise and concise discussion.	6
MAP-03-025	3.9.6.3 3.9.9	3.9-2 3.9-4	Consistent with DCD Rev.2	Delete COL 3.9(7)	6
CTS-00829	Table 3.9-202 3.9-203	From 3.9-7 To 3.9-12	Editorial correction	Correct COL item number	6
CTS-00868	3.10.2	3.10-2	Revise COL 3.10(5)	Change "equipment" to "components". And add sentence in last paragraph "Results…program."	6
CTS-00909	3.5.1.1.4	3.5-1	Editorial correction	Correction of title	7
DCD_3.5.1.1.3-S01	3.5.1.1.4 3.5.4	3.5-1 3.5-4	Reflect Response to DCD RAI No. 359	Consolidation of description.	7
CTS-00883	3.5.1.5	3.5-2	Clarification	Add following sentence at the first part of second paragraph of	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				Section 3.5.1.5; Externally initiated missiles considered for design are based on tornado missiles as described in DCD Subsection 3.5.1.4.	
MAP-03-022	Table 3.7.2-1R (Sheet 1 of 2)	3.7-17	DCD Rev.2 Clarification	Change the name of program, “NASTRAN” to “ANSYS”.	7
DCD_03.08.10-14	3.8.4	3.8-5	Reflect DCD RAI No.223	Delete “and are designed to the site-specific SSE” from the second paragraph of Section 3.8.4.	7
MAP-03-012	3.8.4.7	3.8-11	DCD Rev. 2 Clarification	Add “Monitoring of seismic Category I structures includes base settlements and differential displacements.”	7
MAP-03-026	3.9.6.4	3.9-3	Clarification of COL Applicant’s action in DCD Rev.2	Add “the Nonmandatory Appendix A of “prior to “ASME OM Code”. Change “The IST program for dynamic restraints will be described based on the IST program plan outlined 12 months prior to fuel load.” to “The IST program plan for dynamic restraints will be provided 12	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				months prior to fuel load".	
MAP-03-028	3H	3H-1	To reflect change in scope of appendix based on coupled analyses in Technical Report MUAP-08005, dated on Apr.24, 2008	"Model Properties and Seismic Analysis Results for Lumped Mass Stick Models of R/B-PCCV-Containment Interior structures on a Common Basemat, And PS/Bs on individual basemats" to "Model Properties for Lumped Mass Stick Models of R/B-PCCV-Containment Internal Structures on a Common Basemat, and PS/Bs on Individual Basemats"	7

3.5 MISSILE PROTECTION

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

~~3.5.1.1.2.1~~3.5.1.1.4 ~~Missiles Not Considered Credible~~Gravitational Missiles

CTS-00909
DCD_3.5.1.1
-04

CP COL 3.5(1) Replace the ~~last~~ paragraph of DCD Subsection ~~3.5.1.1.2.1~~3.5.1.1.4 with the following.

CPNPP Unit 3 and 4 procedures will be issued prior to fuel load in accordance with Subsection 13.5.2.2 to require unsecured equipment including portable pressurized gas cylinders, located inside or outside containment for maintenance or undergoing maintenance to be removed from containment prior to operation, moved to a location where it is not a potential hazard to SSCs important to safety, or seismically restrained to prevent it from becoming a missile.

DCD_3.5.1.1
.3-S01

3.5.1.3.1 Geometry

CP COL 3.5(6) Replace the third paragraph of DCD Subsection 3.5.1.3.1.

The CPNPP site plan (Figure 1.2-1R) reflects the placement of CPNPP Units 3 and 4 in relation to existing Units 1 and 2. The location of CPNPP Units 3 and 4 is such that CPNPP Units 1 and 2 are outside the low-trajectory turbine missile strike zone inclined at 25 degrees to the turbine, and therefore no postulated low-trajectory turbine missiles affect CPNPP Units 1 and 2. Similarly, no postulated low trajectory turbine missiles from CPNPP Units 1 and 2 will affect CPNPP Units 3 and 4. The placement of CPNPP Units 3 and 4, however, does generate an unfavorable orientation, as defined in NUREG-0800, Section 3.5.1, of the turbine generator (T/G) in relationship with safety-related SSCs of the adjacent US-APWR Unit. (See Subsection 3.5.1.3.2 for impact to P_4).

3.5.1.3.2 Evaluation

CP COL 3.5(2) Replace the third paragraph of DCD Subsection 3.5.1.3.2 with the following.

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. For unfavorably oriented

A_K = 0.6 miles (skid length) x 650 ft = 2,059,200 ft^2, where the skid length for military aircraft is determined from Reference 3.5-201, and the width of skid is equal to the widest dimension of the power block.

A_B = 490 ft x 650 ft = 318,500 ft^2 as the total land occupied by the power block.

The annual number of aircraft operations on military training route VR-158 noted in Subsection 2.2.2.7.2 confirms operations are less than 19,300 operations per year. Therefore, neither an air crash nor an air transportation accident is required to be considered as part of the design basis.

3.5.2 Structures, Systems, and Components to be Protected from Externally Generated Missiles

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CP COL 3.5(5) Replace the second sentence in the second paragraph of DCD Subsection 3.5.2 with the following.

No site-specific hazards for external events are shown to produce missiles more energetic than tornado missiles identified for the US-APWR standard plant design. The design basis for externally generated missiles is therefore bounded by the standard plant design criteria for tornado-generated missiles.

3.5.4 Combined License Information

Replace the content of DCD Subsection 3.5.4 with the following.

CP COL 3.5(1) ***3.5(1)*** ~~*Equipment removed from containment prior to operation*~~*Prevent unsecured equipment from becoming potential hazard* DCD_3.5.1.1.3-S01

This COL item is addressed in Subsection ~~*3.5.1.1.2.1*~~*3.5.1.1.4*.

CP COL 3.5(2) ***3.5(2)*** *Maintain P_1 within acceptable limit*

This COL item is addressed in Subsection 3.5.1.3.2.

CP COL 3.5(3) ***3.5(3)*** *Presence of potential hazards and effects in vicinity of site, except aircraft*

This COL item is addressed in Subsection 3.5.1.5.

CP COL 3.5(4) ***3.5(4)*** *Site interface parameters for aircraft crashes and air transportation accidents*

This COL item is addressed in Subsection 3.5.1.6.

T/Gs determined in Subsection 3.5.1.3, the product of P_2 and P_3 is estimated as 10^{-2} per year, which is a more conservative estimate than for a favorably oriented single unit. CPNPP Unit 3 and 4 procedures will be implemented 6 months prior to delivery of the T/G to require inspection intervals established in Technical Report, MUAP-07028-NP, "Probability of Missile Generation From Low Pressure Turbines" (Reference 3.5-17), and to require a turbine valve test frequency per Technical Report, MUAP-07029-NP, "Probabilistic Evaluation of Turbine Valve Test Frequency" (Reference 3.5-18), and other actions to maintain P_1 within acceptable limits as outlined in NUREG-0800, Standard Review Plan (SRP) 3.5.1.3, Table 3.5.1.3-1 (Reference 3.5-7). These inspection intervals maintain the probability of turbine failure resulting in the ejection of turbine rotor (or internal structure) fragments through the turbine casing, P_1, as less than 10^{-5} per year. The acceptable risk rate $P_4 = P_1 \times P_2 \times P_3$ is therefore maintained as less than 10^{-7} per year.

RCOL2_03.05.01.03-1

3.5.1.5 Site Proximity Missiles (Except Aircraft)

CP COL 3.5(3) Replace the paragraph of DCD Subsection 3.5.1.5 with the following.

Externally initiated missiles considered for design are based on tornado missiles as described in DCD Subsection 3.5.1.4. As described in Section 2.2, no potential site-proximity missile hazards are identified except aircraft, which are evaluated in Subsection 3.5.1.6.

CTS-00883

3.5.1.6 Aircraft Hazards

CP COL 3.5(4) Replace the paragraph of DCD Subsection 3.5.1.6 with the following.

The probability of aircraft-related accidents for CPNPP Units 3 and 4 is less than an order of magnitude of 10^{-7} per year for aircraft, airway, and airport information reflected in Subsection 2.2.2.7 and expanded as follows.

- Allowing for an 8 nautical mile wide airway, the plant is at least 2 statute miles beyond the edge of the nearest federal airways.
- The reported average operations of 73 per day (26,645 per year) at Granbury Municipal airport are well below the conservative threshold of 500 D^2 operations per year, where D is the plant-to-airport distance of 10 statute miles.
- Allowing for a 10 nautical mile wide airway, the plant is 2 statute miles beyond the edge of the nearest military flight path.

Table 3.7.2-1R

Summary of Dynamic Analysis and Combination Techniques (Sheet 1 of 2)

~~CP COL 3.7(29)~~ CTS-00532

Model	Analysis Method	Program	Three Components Combination (for Purposes of Dynamic Analysis)	Modal Combination	
Three-dimensional R/B-PCCV-containment internal structure Lumped Mass Stick Model (4)	Direct Integration Time History Analysis	ANSYS	square root sum of the squares (SRSS)	N/A	
Three-dimensional R/B-PCCV-containment internal structure FE Model (1)	Time History Analysis in Frequency Domain	~~NASTRA~~ NANSYS	N/A ~~(1)~~	N/A	MAP-03-022
Three-dimensional R/B-PCCV-containment internal structure SSI Model	Time History Analysis in Frequency Domain using sub-structuring technique	SASSI	N/A (5)	N/A	CTS-00532
Three-dimensional reactor coolant loop (RCL) Piping FE Model (2)	Direct Integration Time History Analysis	ANSYS	SRSS	N/A	
Three-dimensional PS/Bs Lumped Mass Stick Models (3)	Direct Integration Time History Analysis	ANSYS	SRSS	N/A	
Three-dimensional RCL-R/B-PCCV-containment internal structure Lumped Mass Stick Model	Direct Integration Time History Analysis	ANSYS	SRSS	N/A	
Three-dimensional UHSRS FE model (6)	Response Spectra Analysis	ANSYS	Newmark 100-40-40	Lindley-Yow method	CTS-00532
Three-dimensional UHSRS SSI model	Time History Analysis in Frequency Domain using sub-structuring technique	SASSI	SRSS	N/A	CTS-00532
Three-dimensional ESWPT FE models	Modal Analysis	ANSYS	N/A(7)	N/A	CTS-00532
Three-dimensional ESWPT SSI models	Time History Analysis in Frequency Domain using sub-structuring technique	SASSI	SRSS	N/A	CTS-00532
Three-dimensional PSFSV FE model	Modal Analysis	ANSYS	N/A(7)	N/A	CTS-00532
Three-dimensional PSFSV SSI model	Time History Analysis in Frequency Domain using sub-structuring technique	SASSI	SRSS	N/A	CTS-00532

CP COL 3.7(29) CP COL 3.7(29) CP COL 3.7(29) CP COL 3.7(29) CP COL 3.7(29) CP COL 3.7(29)

3.8.4 Other Seismic Category I Structures

CP COL 3.8(15) Replace the fourth paragraph in DCD Subsection 3.8.4 with the following.

The ESWPT, UHSRS, and PSFSVs are site-specific seismic category I structures ~~and are designed to the site-specific SSE~~. These structures are discussed in detail in Subsection 3.8.4.1.3. No site-specific seismic category II structures are applicable at CPNPP. DCD_03.08.10-14

3.8.4.1.3 ESWPT, UHSRS, PSFSVs, and Other Site-Specific Structures

CP COL 3.8(19) Replace the second paragraph in DCD Subsection 3.8.4.1.3 with the following.

The ESWPT, UHSRS, and PSFSVs are designed to the site-specific SSE, and are described in detail in Subsections 3.8.4.1.3.1, 3.8.4.1.3.2, and 3.8.4.1.3.3, respectively. Figure 3.8-201 provides the general arrangement of ESWPT, UHSRS, and PSFSVs.

3.8.4.1.3.1 ESWPT

The ESWPT is an underground reinforced concrete structure. Figure 3.8-203 shows the typical section of the ESWPT. The tunnel layout is a rectangular configuration forming a closed looped structure starting at the UHS Basins and terminating at the T/B. The outside dimensions of the tunnel are shown in Figure 3.8-203. The tunnel is divided into two sections by an interior concrete wall to provide separation of piping trains. Each section contains both ESWS supply and return lines. End walls are also provided where required to maintain train separation. The top of the tunnel is approximately 12.25 ft. below grade. Access to the tunnel is provided by reinforced concrete manholes.

The following structures are supported by the ESWPT as an integral part of the tunnel:

- Fuel/Pipe access tunnels, providing access from the PS/B to the PSFSVs are shown in Figures 3.8-204 and 3.8-212.
- Reinforced concrete air intake enclosures projecting above the ground for ESWS piping from the ESWS pump houses.

For details see Figures 3.8-202 through 3.8-205.

elevation 215 ft. Since the support below the structure will not exhibit long-term settlement effects, the subgrade stiffness calculated from ASCE-4 Section 3.3.4.2 is used for analysis of both static and seismic loads.

Vertical loads present on the roof of the PSFSVs are carried by the perimeter and interior walls. The roof acts as a two-way slab with a single span in the north-south direction and a 3-span continuous slab with two-way action in the east-west direction. The vertical wall loads are transmitted to the mat slab and into the bedrock. The exterior walls are also designed for static and dynamic soil pressure in accordance with ASCE 4-98 (Reference 3.8-34). Walls loaded laterally by earth pressure act as two-way plate members, spreading load to the mat slab and perpendicular shear walls. For seismic load cases, the shear walls are designed to resist 100% of the applied lateral load. The shear walls transmit load to the foundation mat along their length. The load in the foundation mat is then transferred to the bedrock via friction and shear keys.

3.8.4.6.1.1 Concrete

CP COL 3.8(28) Replace the second sentence of the first paragraph in DCD Subsection 3.8.4.6.1.1 with the following.

For ESWPT, UHSRS, and PSFSVs concrete compressive strength, f'_c = 5,000 psi is utilized.

3.8.4.7 Testing and Inservice Inspection Requirements

CP COL 3.8(22) Replace the ~~content~~second through last paragraph of Subsection 3.8.4.7 with the following. MAP-03-012

A site-specific program for ~~M~~monitoring and maintenance of seismic category I structures is ~~required to be~~ performed in accordance with the requirements of NUMARC 93-01 (Reference 3.8-28) and 10 CFR 50.65 (Reference 3.8-29) as detailed in RG 1.160 (Reference 3.8-30). Monitoring of seismic Category I structures includes base settlements and differential displacements. MAP-03-012 MAP-03-012

Prior to completion of construction, site-specific programs are developed in accordance with RG 1.127 (Reference 3.8-47) for ISI of seismic category I water control structures, including the UHSRS and any associated safety and performance instrumentation.

The site-specific programs address in particular ISI of critical areas to assure plant safety through appropriate levels of monitoring and maintenance. Any special design provisions (such as providing sufficient physical access or providing

~~Any alternate method for verification of valve position indicator operation, and its justification, is described in the IST program plan outlined 12 months prior to fuel load.~~ MAP-03-025

3.9.6.3.1 IST Program for MOVs

STD COL 3.9(9) Replace the second sentence of the third paragraph in DCD Subsection 3.9.6.3.1 with the following.

The IST program plan identifies those motor operated valves (MOVs) that require non-intrusive testing technique.

3.9.6.4 IST Program for Dynamic Restraints

STD COL 3.9(6) Replace the second paragraph in DCD Subsection 3.9.6.4 with the following.

The IST program plan for dynamic restraints (snubbers) complies with the requirements in the latest edition and addenda of the Nonmandatory Appendix A of ASME OM Code incorporated by reference in 10 CFR 50.55a (Reference 3.9-29). The IST program plan for dynamic restraints will be provided~~described based on the IST program plan outlined~~ 12 months prior to fuel load. MAP-03-026

3.9.9 Combined License Information

Replace the content of DCD Subsection 3.9.9 with the following.

STD COL 3.9(1) ***3.9(1)*** *Snubber functionality*

This COL item is addressed in Subsection 3.9.3.4.2.5

CP COL 3.9(2) ***3.9(2)*** *Classification of CPNPP Unit 3 reactor internals as prototype*

This COL item is addressed in Subsection 3.9.2.4.1.

3.9(3) *Deleted from the DCD.*

3.9(4) *Deletedfrom the DCD.*

3.9(5) *Deletedfrom the DCD.*

3H MODEL PROPERTIES ~~AND SEISMIC ANALYSIS RESULTS~~ FOR LUMPED MASS STICK MODELS OF R/B-PCCV-CONTAINMENT ~~INTERIOR~~INTERNAL STRUCTURES ON A COMMON BASEMAT, AND PS/BS ON INDIVIDUAL BASEMATS

MAP-03-028

MAP-03-028

This section of the referenced DCD is incorporated by reference with no departures or supplements.

Chapter 4

Chapter 4 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP_4.4.7-2	4.4	4.4-1	To be consistent with next DCD revision (Rev.2)	Delete COL 4.4 (1) and associated description	4

Chapter 5

Chapter 5 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00528	5.2.1.2	5.2-1	Editorial correction	Include words about RG 1.84.	0
CTS-00675	5.2.1.2	5.2-1	Editorial correction	Add "Units 3 and 4" after Comanche Peak Nuclear Power Plant. Delete a period in LMN	0
RCOL2_05.03-1	5.3.2.3	5.3-3	Responses to RAI No. 2 Luminant Letter TXNB-09010 Dated 5/1/2009	Add clarification about the timing of submitting PTS evaluation using the as–procured reactor vessel material properties.	-
RCOL2_05.03.02-2	5.3.2.1	5.3-2 5.3-3	Response to RAI No. 8 Luminant Letter no.TXNB-09028 Date 8/7/2009	Include a commitment to update P/T limits before fuel load. The RAI No.2 change is superseded by RAI No. 8.	-
DCD_05.03.02-1	5.3.2.1	5.3-2	Reflect Response to DCD RAI No. 287	Stated that generic PTLR will be applied for CPNPP 3&4.	4
DCD_05.02.01.01-1	5.2.1.1	5.2-1 5.2-3	Reflect Response to DCD RAI No. 264	Add CP COL 5.2(11)	7
DCD_05.02.03-1	5.2.3.2.1	5.2-1 5.2-3	Reflect Response to DCD RAI No. 224	Add CP COL 5.2(12)	7
MAP-05-101	5.2.2.4	5.2-1 5.2-3	Consistent with DCD Rev.2	Delete STD COL5.2(10)	7
DCD_05.02.04-8	5.2.4.1.1	5.2-2 5.2-3	Reflect Response to DCD RAI No. 254	Add CP COL 5.2(13)	7
DCD_05.02.05-7, 10	5.2.5.9	5.2-2 5.2-3	Reflect Response to DCD RAI No. 438	Add CP COL 5.2(14) and (15)	7
CTS-00884	5.3.2.1	5.3-2	Editorial	Delete “for CPNPP Units 3 and 4” from STD COL5.3(1)	7
CTS-00793	5.3.3.7	5.3-3	Editorial correction	Made a minor change in description.	7

5.2 INTEGRITY OF REACTOR COOLANT PRESSURE BOUNDARY

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

5.2.1.1 Compliance with 10 CFR 50, Section 50.55a

DCD_05.02.01.01-1

CP COL 5.2(11) Replace the third sentence of the second paragraph with the following.

Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4 uses ASME Code editions and addenda that is the same as those specified in the US-APWR DCD.

5.2.1.2 Compliance with Applicable Code Cases

Replace the third paragraph in DCD Subsection 5.2.1.2 with the following.

CP COL 5.2(1)
CP COL 5.2(2)
CP COL 5.2(3)

Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4 uses no Code Cases listed in Regulatory Guide (RG) 1.84 beyond those listed in the referenced DCD. The use of Code Cases including those listed in RG 1.147 is identified in the inservice inspection (ISI) program (Subsection 5.2.4 and Section 6.6). The use of Code Cases including those listed in RG 1.192 is identified in the inservice testing (IST) program (Subsection 3.9.6 and 5.2.4).

CTS-00675

CTS-00528

5.2.3.2.1 Chemistry with Reactor Coolant

DCD_05.02.03-1

STD COL 5.2(12) Replace the second sentence of the third paragraph with the following.

Water chemistry of the US-APWR reactor coolant will meet the latest version of the EPRI Water Chemistry Guidelines in effect at the time of COLA submittal.

~~5.2.2.4 Equipment and Component Description~~

MAP-05-101

~~STD COL 5.2(10)~~ ~~Replace the last paragraph in DCD Subsection 5.2.2.4 with the following.~~ MAP-05-101

~~The actual throat area for the pressurizer safety valves and the containment spray / residual heat removal (CS/RHR) pump suction relief valves will be determined at the procurement stage.~~

5.2.4.1 Inservice Inspection and Testing Program

STD COL 5.2(4) Replace the first sentence of the fourth paragraph in DCD Subsection 5.2.4.1 with the following.

The implementation milestones for the ISI program and the IST program are provided in Table 13.4-201"

Add the following text after the first sentence of the fifth paragraph in DCD Subsection 5.2.4.1.

The boric acid corrosion control program consists of visual inspection of component surfaces for evidence of leakage, removal of any boric acid residue found, assessment of the corrosion, and inspection follow-up.

5.2.4.1.1 Arrangement and Accessibility

DCD_05.02.04-8

STD COL 5.2(13) Replace the last paragraph with the following.

Class 1 component design is the same as the DCD design.

5.2.4.2 Preservice Inspection and Testing Program

STD COL 5.2(5) Replace the fourth sentence of the first paragraph in DCD Subsection 5.2.4.2 with the following.

The preservice inspection (PSI) program complies with the editions and addenda of American Society of Mechanical Engineers (ASME) Code Section XI incorporated by reference in Code of Federal Regulations, Title 10 (10 CFR)

50.55a(b) as applied to the construction of the component. The implementation milestones for the PSI and preservice testing (PST) program are provided in Table 13.4-201.

STD COL 5.2(14) Add the following Subsection after DCD Subsection 5.2.5.8.

STD COL 5.2(15)

DCD_05.02.05-7
DCD_05.02.05-10

5.2.5.9 Operating Procedures

The operating procedures regarding conversion of the referenced leak detection instruments into a common leak rate and operator actions in response to prolonged leakage are included in system operating procedures in Subsection 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.

5.2.6 Combined License Information

Replace the content of DCD Subsection 5.2.6 with the following.

CP COL 5.2(1) ***5.2(1)*** *ASME Code Cases that are approved in Regulatory Guide 1.84*

This Combined License (COL) item is addressed in Subsection 5.2.1.2.

CP COL 5.2(2) ***5.2(2)*** *ASME Code Cases that are approved in Regulatory Guide 1.147*

This COL item is addressed in Subsection 5.2.1.2.

CP COL 5.2(3) ***5.2(3)*** *ASME Code Cases that are approved in Regulatory Guide 1.192*

This COL item is addressed in Subsection 5.2.1.2.

STD COL 5.2(4) ***5.2(4)*** *Inservice inspection and testing program for the Reactor Coolant Pressure Boundary (RCPB)*

This COL item is addressed in Subsection 5.2.4.1 and Table 13.4-201.

STD COL 5.2(5) ***5.2(5)*** *Preservice inspection and testing program for the RCPB*

This COL item is addressed in Subsection 5.2.4.2 and Table 13.4-201.

5.2(6) *Deleted from the DCD.*

5.2(7) *Deleted from the DCD.*

5.2(8) *Deleted from the DCD.*

5.2(9) *Deleted from the DCD.*

~~STD COL 5.2(10)~~ ***5.2(10)*** ~~*Safety and relief valve information*~~*Deleted from the DCD.* MAP-05-101

~~*This COL item is addressed in Subsection 5.2.2.4.*~~

STD COL 5.2(11) ***5.2(11)*** *ASME Code Edition and Addenda* DCD_05.02.01.01-1

This COL item is addressed in Subsection 5.2.1.1

STD COL 5.2(12) ***5.2(12)*** *EPRI Primary Water Chemistry Guideline* DCD_05.02.03-1

This COL item is addressed in Subsection 5.2.3.2.1.

CP COL 5.2(13) ***5.2(13)*** *ISI Accessibility* DCD_05.02.04-8

This COL item is addressed in Subsection 5.2.4.1.1.

STD COL 5.2(14) ***5.2(14)*** *Procedure for conversation into common leakage rate* DCD_05.02.05-7

This COL item is addressed in Subsection 5.2.5.9. DCD_05.02.05-10

STD COL 5.2(15) ***5.2(15)*** *Procedure for operator response to prolonged low-level leakage*

This COL item is addressed in Subsection 5.2.5.9.

CP COL 5.3(2) Add the following text after the last paragraph in DCD Subsection 5.3.1.6.3.

A summary technical report, including test results, is submitted as specified in 10 CFR 50.4, for the contents of each capsule withdrawn, within one year of the date of capsule withdrawal unless an extension is granted by the Director, Office of Nuclear Reactor Regulation.

The report includes the data required by ASTM E-185-82, as specified in paragraph III.B.1 of 10 CFR 50, Appendix H, and includes the results of the fracture toughness tests conducted on the beltline materials in the irradiated and unirradiated conditions.

If the test results indicate a change in the Technical Specifications, either in the pressure-temperature limits or in the operating procedures, the expected date for submittal of the revised Technical Specifications is provided with the report.

5.3.2.1 Limit Curves

STD COL 5.3(1) Replace the last sentence in the second paragraph with the following in DCD Subsection 5.3.2.1.

~~Plant specific curves will be developed and included in the pressure and temperature limits reports (PTLR) for CPNPP Units 3 and 4, as required by Technical Specification 5.6.4.~~ The generic pressure and temperature limits reports (PTLR) for the US-APWR reactor vessel will be applied. DCD_05.03.02-1 CTS-00884

The COL Holder will update the P/T limits prior to fuel loading using the PTLR methodologies approved in the US-APWR DCD and the plant specific material properties and inform the NRC of the updated P/T limits as required by the Technical Specifications. RCOL2_05.03.02-2 CTS-00884

5.3.2.2 Operating Procedures

STD COL 5.3(1) Replace the first sentence in the last paragraph with the following in DCD Subsection 5.3.2.2.

Operating procedures will be developed ~~for CPNPP Units 3 and 4~~ in accordance with Section 13.5, such that the plant-specific pressure-temperature limit curves are not exceeded and Technical Specification requirements are satisfied. CTS-00884

5.3.2.3 Pressurized Thermal Shock

CP COL 5.3(4) Replace the last paragraph with the following in DCD Subsection 5.3.2.3.

The reference pressurized thermal shock temperature (RT_{PTS}) values for CPNPP Units 3 and 4 are calculated based on the material property requirements detailed in DCD Subsection 5.3.1.5, and the results are as shown in DCD Table 5.3-4. RCOL2_05.03-1 RCOL2_05.03.02-2

5.3.2.4 Upper Shelf Energy

CP COL 5.3(4) Replace the last paragraph with the following in DCD Subsection 5.3.2.4.

The upper shelf energy (USE) at end-of-life (EOL) for CPNPP Units 3 and 4 is calculated based on material property requirements detailed in DCD Subsection 5.3.1.5, and the results are as shown in DCD Table 5.3-4.

5.3.3.7 Inservice Surveillance

CP COL 5.3(5) Replace the fourth and fifth sentences in the first paragraph of DCD Subsection 5.3.3.7 with the following.

The detailed list of inservice and preservice inspections ~~for the CPNPP Units 3 and 4 reactor vessel is~~ shown in DCD Tables 5.3-2 and 5.3-3 is used for CPNPP Units 3 and 4. CTS-00793

5.3.4 Combined License Information

Replace the content of DCD Subsection 5.3.4 with the following.

STD COL 5.3(1) ***COL 5.3(1)*** *Pressure-Temperature Limit Curves*

This COL item is addressed in Subsections 5.3.2.1 and 5.3.2.2.

CP COL 5.3(2)
STD COL 5.3(2) ***COL 5.3(2)*** *Reactor Vessel Material Surveillance Program*

This COL item is addressed in Subsection 5.3.1.6.

Chapter 6

Chapter 6 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00518 CTS-00644	6.4.4	6-i 6.4-1 6.4-3 1.8-43	To reflect resolution of acceptance review issue	Include dose evaluation in the control room due to a post-accident release from the other US-APWR unit or existing CPNPP unit.	0
	6.4.4		Editorial correction	Add Subsection “6.4.4.2” in Table 1.8-201 and Subsection 6.4.7.	0
CTS-00642	6.1	6.1-1	Update	All 6.1 COL Items have been deleted from the DCD. This FSAR section is now IBR with no departures or supplements.	0
MAP-06-001	6.1.1.2.2	6.1-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.1(1)	0
MAP-06-002	6.1.1.1	6.1-1 6.1-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.1(2)	0
MAP-06-003	6.1.1.2.1	6.1-1 6.1-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.1(3)	0
MAP-06-004	6.1.1.2.1	6.1-1 6.1-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.1(4)	0
MAP-06-005	6.1.2	6.1-2 6.1-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.1(5)	0
MAP-06-006	6.2.1.1.3.4 6.2.1.5.7	6.2-1 6.2-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.2(1)	0
MAP-06-007	6.2.2.3 Table 6.2.2-2R	6.2-1 6.2-4 6.2-6	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.2(9)	0
MAP-06-008	6.2.4.2	6.2-2 6.2-3	Deletion of COL item. Letter MHI Ref:UAP-	Delete COL 6.2(6)	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			HF-08259, dated on Nov.7, 2008		
MAP-06-009	6.2.5.2	6.2-2 6.2-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.2(7)	0
DCD_06.02.06-2	6.2.6.1	6.2-3	DCD_RAI 06.02.06-2	Change “first sentence “ to “first and second sentences”.	0
CTS-00643	6.3	6.3-1	Update	All 6.3 COL Items have been deleted from the DCD. This FSAR section is now IBR with no departures or supplements.	0
MAP-06-011	6.3.2.8	6.3-1 6.3-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.3(3)	0
MAP-06-012	6.3.2.2.4	6.3-1 6.3-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.3(4)	0
MAP-06-013	6.3.2.4	6.3-1 6.3-2	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.3(6)	0
MAP-06-014	6.4.3 6.4.7	6.4-1 6.4-3	Revision of COL 6.4(2)	Revise COL Item to only discuss automatic actions and manual procedures for the MCR HVAC system in the event of postulated toxic gas release.	0
MAP-06-015	6.4.2.2.1	6.4-1 6.4-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.4(4)	0
CTS-00652	6.4.4.2 6.4.7	6.4-2 6.4-3	Re-evaluation of COL Item	Associate COL 6.4(2) with Subsection 6.4.4.2.	0
CTS-00653	6.4.4.2	6.4-3	Erratum	Change “5.2 ppm “ to “5.7 ppm”.	0
MAP-06-016	6.5.1.7	6.5-1	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 6.5(4)	0

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-06-018	6.6.8	6.6-1	Revision of COL 6.6(2)	Revise description to only identify the implementation milestone of the program.	0
CTS-00696	6.4.4.2	6.4-1	NRC Staff Reviewer Comment Incorporation from 03-23-25-09 Hazards Analysis Audit	Added pointer to Table 2.2-214 for toxic chemicals that do not meet RG 1.78 screening criteria.	1
DCD_06.01.02-1	6.1	6.1-1	Reflect Response to DCD RAI No. 365 revision 1	Added COL 6.1(7) coating program	4
DCD_06.02.02-31	6.2.2.3	6.2-2	Reflect Response to DCD RAI No. 354 revision 1	Add “Subsection 13.5.1” between “procedures” and “implement” in the second sentence.	7

STD COL 6.2(5) Replace the first sentence of the tenth paragraph in DCD Subsection 6.2.2.3 with the following.

Administrative ~~procedures implement~~procedures in Subsection 13.5.1 implement the containment cleanliness program. DCD_06.02.02-31

Procedures to remove foreign materials and minimize the amount of debris that might be left in containment following refueling and maintenance outages address the following:

- Frequency of cleanliness control and inspection activities for operation and maintenance
- Restriction of materials introduced into the containment
- Accounting for materials introduced into and out of the containment (e.g., scaffold, tape, labels, plastic film, paper, cloth, keys, and pens)
- Cleaning of maintenance outage area, including areas associated with removal or replacement of insulation
- Cleanliness inspections and removal of debris/foreign material, including operation and maintenance areas, RWSP, debris interceptors, RWSP vent and drain lines (available for inspection), and strainer debris
- Preparation and review of entry/exit logs and inspection records

The containment cleanliness program including administrative procedures will be developed and implemented prior to initial fuel load.

~~6.2.4.2 System Design~~ MAP-06-008

~~STD COL 6.2(6) Replace the last sentence of the forth paragraph in DCD Subsection 6.2.4.2 with the following.~~

~~A list of as-built pipe run distances from the outer containment isolation valves to the containment penetrations will be prepared prior to initial fuel load.~~

~~6.2.5.2 System Design~~ MAP-06-009

~~STD COL 6.2(7) Replace the last paragraph in DCD Subsection 6.2.5.2 with the following.~~

Chapter 7

Chapter 7 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_7.04_1	7.4.1.6	7.4-1	Response to RAI No.4 Luminant Letter no.TXNB-09020 Date 5/26/2009	Add a description of reference; FSAR subsection 9.2.5.	-
RCOL2_7.05_1	7.5.1.6.2	7.5-1	Response to RAI No.5 Luminant Letter no. TXNB-09020 Date 5/26/2009	Revise the description of EOF capability. EOF has identical information as TSC and MCR, but does not control capability.	-
CTS-00721	Table 7.4-201	7.4-2	Editorial correction	Change the Safe shutdown column of ESWS from “No” to “Yes”.	4
DCD_07.05-17	7.5.1.1 7.5.4 Table 7.5-201	7.5-1 7.5-2 7.5-3	Reflect Response to DCD RAI No. 238	The descriptions of Site-specific type E PAM variables for metrological parameters are added.	4

Chapter 8

Chapter 8 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00451	List of Figures, Figure 8.2-201	8-iii 8.2-23	Editorial correction	Add “Relevant Portions of” to the title of the Figure 8.2-201.	0
CTS-00640	8.2.1.2	8.2-3	Editorial correction	Change “Any” to “Both of any”.	0
CTS-00686	8.2.1.2.1.1	8.2-5	Editorial correction	Delete “from”.	0
CTS-00641	8.2.1.2.1.1	8.2-6	Erratum	Change “is” to “are”.	0
CTS-00477	8.2	8.2-6	Clarification	Change description of offsite power system.	0
CTS-00479	8.4	8.4-1	Editorial correction	Change section title in bold font.	0
CTS-00722	8.3	8.3-2	COL item closure of the original COL Holder Items	Change the description of Grounding and Lightning Protection System design information.	4
RCOL2_08.03.01-1	Table 8.3.1-4R	8.3-6 8.3-7 8.3-8 8.3-9	Response to RAI No. 23 Luminant Letter no.TXNB-09040 Date 9/8/2009	Added “CP COL 9.2(6)” and “CP COL 9.2(20)” in left margin annotation of Table 8.3.1-4R sheets 1 to 4.	-
RCOL2_08.02-24	8.2.2.2	8.2-12	Response to RAI No. 24 Luminant Letter no.TXNB-09040 Date 9/8/2009	Replaced “almost same” with “in a similar manner” in the second sentence, and added “to be” in the last sentence of the last paragraph, for clarification.	-
MAP-08-105	8.1.5.3.5	8.1-2	Consistent with DCD Rev.2	Added description of IEEE Std 80-2000 in the DCD so no longer necessary to add in COLA.	7
DCD_08.03.01-21	8.2.1.2	8.2-3 8.2-4	Reflect Response to DCD RAI No. 10	Deleted first, second, third and last sentences from the second paragraph for CP COL 8.2(4).	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-08-101	Figure 8.2-203	8.2-25	Change capacity of UAT and RAT	Change RAT1 and RAT2 capacities from “65MVA” to “72MVA”.	7
MAP-08-101	Figure 8.2-204	8.2-26	Change capacity of UAT and RAT	Change UAT1 and UAT2 capacities from “65MVA” to “72MVA”.	7
MAP-08-104	8.3.1.1.9	8.3-1	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Changed reference section from “8.3.1.3” to “8.3.1.3.2” in the second paragraph.	7
CTS-00908	8.3.1.1.11	8.3-1	Editorial correction	Replaced “STD COL 8.3(2)” with “CP COL 8.3(2)”	7
MAP-08-104	8.3.1.3.2	8.3-2	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Replaced all of paragraphs for STD COL 8.3(3) and added subsection 8.3.1.3.2.	7
DCD_08.03.01-32	8.3.1.3.4	8.3-2	Reflect Response to DCD RAI No. 386	Added subsection 8.3.1.3.4.	7
DCD_08.03.01-33	8.3.1.3.5	8.3-2	Reflect Response to DCD RAI No. 386	Added subsection 8.3.1.3.5.	7
MAP-08-104	8.3.2.1.1	8.3-2	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Changed reference section from “8.3.2.3” to “8.3.2.3.2” in the second paragraph.	7
MAP-08-104	8.3.2.1.2	8.3-2	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Changed reference section from “8.3.2.3” to “8.3.2.3.2” in the second paragraph.	7
MAP-08-104	8.3.2.3.2	8.3-3	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Replaced all of paragraphs for STD COL 8.3(8) and added subsection 8.3.2.3.2.	7
CTS-00908	8.3.4	8.3-3	Editorial correction	Replaced “STD COL 8.3(2)” with “CP COL 8.3(2)”	7
MAP-08-104	8.3.4	8.3-4	Add subsections 8.3.1.3 and 8.3.2.3 in DCD	Changed reference section from “8.3.1.3” to “8.3.1.3.2” to “8.3.2.3.2” for STD COL 8.3(8)	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
DCD_08.03.01-32	8.3.4	8.3-4	Reflect Response to DCD RAI No. 386	Added “STD COL 8.3(10)”.	7
DCD_08.03.01-33	8.3.4	8.3-4	Reflect Response to DCD RAI No. 386	Added “CP COL 8.3(11)”.	7
MAP-08-101	Table 8.3.1-1R (Sheet 1 of 3)	8.3-5	Change capacity of UAT and RAT	Change UAT1, 2 and RAT 1, 2 capacities from “65MVA” to “72MVA”.	7
MAP-08-101	Figure 8.3.1-1R (Sheet 1 of 7)	8.3-10	Change capacity of UAT and RAT	Change UAT1, 2 and RAT 1, 2 capacities from “65MVA” to “72MVA”.	7
DCD_08.03.01-23	Figure 8.3.1-1R (Sheet 1 of 7)	8.3-10	Reflect Response to DCD RAI No. 386	Changed P1 6.9kV bus circuit breaker (RAT side) from “NC” to “NO”, and changed P2 6.9kV bus circuit breaker (UAT side) from “NO” to “NC”.	7
MAP-08-103	Figure 8.3.1-1R (Sheet 1 of 7)	8.3-10	Add power circuit to AAC support system from selector circuit due to changing location of selector circuit	Added power circuit from AAC selector circuit to AAC motor control center.	7
MAP-08-102	Figure 8.3.1-1R (Sheet 5 of 7)	8.3-11	Change threshold of motor capacity connected MV bus of LV bus	Changed from “A-ESSENTIAL CHILLERUNIT” to “SPARE”. And changed from “B-ESSENTIAL CHILLERUNIT” to “SPARE”.	7
MAP-08-102	Figure 8.3.1-1R (Sheet 6 of 7)	8.3-12	Change threshold of motor capacity connected MV bus of LV bus	Changed from “C-ESSENTIAL CHILLERUNIT” to “SPARE”. And changed from “D-ESSENTIAL CHILLERUNIT” to “SPARE”.	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
DCD_08.03.01-23	Figure 8.3.1-2R (Sheet 3 of 24)	8.3-14	Reflect Response to DCD RAI No. 386	Added signal outputs from RAT OC control (MANUAL and AUTO) to sheet “3-1” and “3-2”, respectively.	7

~~CP COL 8.2(3)~~ ~~Add the following bulleted text after the first bulleted text in DCD Subsection 8.1.5.3.5.~~ MAP-08-105

- ~~IEEE Std 80-2000, IEEE Guide for Safety in AC Substation Grounding~~

CP COL 8.2(3) Add the following bulleted text after the thirty-third bulleted text in DCD Subsection 8.1.5.3.5.

- IEEE Std 605-1998, IEEE Guide for Design of Substation Rigid-Bus Structures

transmission lines. During unit startup, shutdown, maintenance, and during all postulated accident conditions, offsite electric power can be supplied to each unit site from the plant switching station through two physically independent transmission tie lines. One of these two transmission tie lines connects to the high-voltage side of the MT via a 345 kV circuit breaker. The other transmission tie line connects to two 345 kV circuit breakers at the unit switchyard, one circuit breaker is for RAT1 and RAT3, and the other circuit breaker is for RAT2 and RAT4. Both of ~~A~~any two outgoing transmission lines between the plant switching station and the remote offsite switching stations adequately maintain the voltage within ±5 percent of 345 kV at the high voltage side terminals of the MTs and RATs, while supplying full auxiliary loads of both units for all normal, abnormal and postulated accident conditions. CTS-00640

CP COL 8.2(4) Add the following information after the last sentence of the second paragraph in DCD Subsection 8.2.1.2.

Neither the grid stability analysis in Subsection 8.2.2.2 nor the failure modes and effects analysis (FMEA) in Subsection 8.2.1.2.1.1 identified the non-safety related offsite power system as risk-significant during all modes of plant operation.

CP COL 8.2(10) Replace the last sentence of the fifteenth paragraph in DCD Subsection 8.2.1.2 with the following.

In case of a sudden pressure relay operation, the transformer is isolated.

CP COL 8.2(4) Replace the first and second sentence of the eighteenth paragraph in DCD Subsection 8.2.1.2 with the following.

~~The MT and the unit auxiliary transformers (UATs) are located in the transformer yard adjacent to the alternate PPS unit switchyard. The RATs are all located in the transformer yard adjacent to the normal PPS unit switchyard. The RATs are separated from the MTs and UATs by three hour rated fire barriers.~~ Minimum one-hour rated fire barriers are provided between all transformers. Figures 8.2-207 and 8.2-208 show physical layout of equipment in the Unit 3 and Unit 4 unit switchyards/transformer yards, respectively. Cables associated with the normal and alternate PPS between unit switchyard and the electrical room in the T/B are routed in separate underground duct bank. Normal and alternate PPS cables are physically separated which minimizes the chance of simultaneous failure. The underground duct bank for these circuits is sealed to prevent degradation in DCD_08.03.01-21

wetted or submerged condition. ~~Temporary sump pumps are available to remove any leakage that may occur.~~ DCD_08.03.01-21

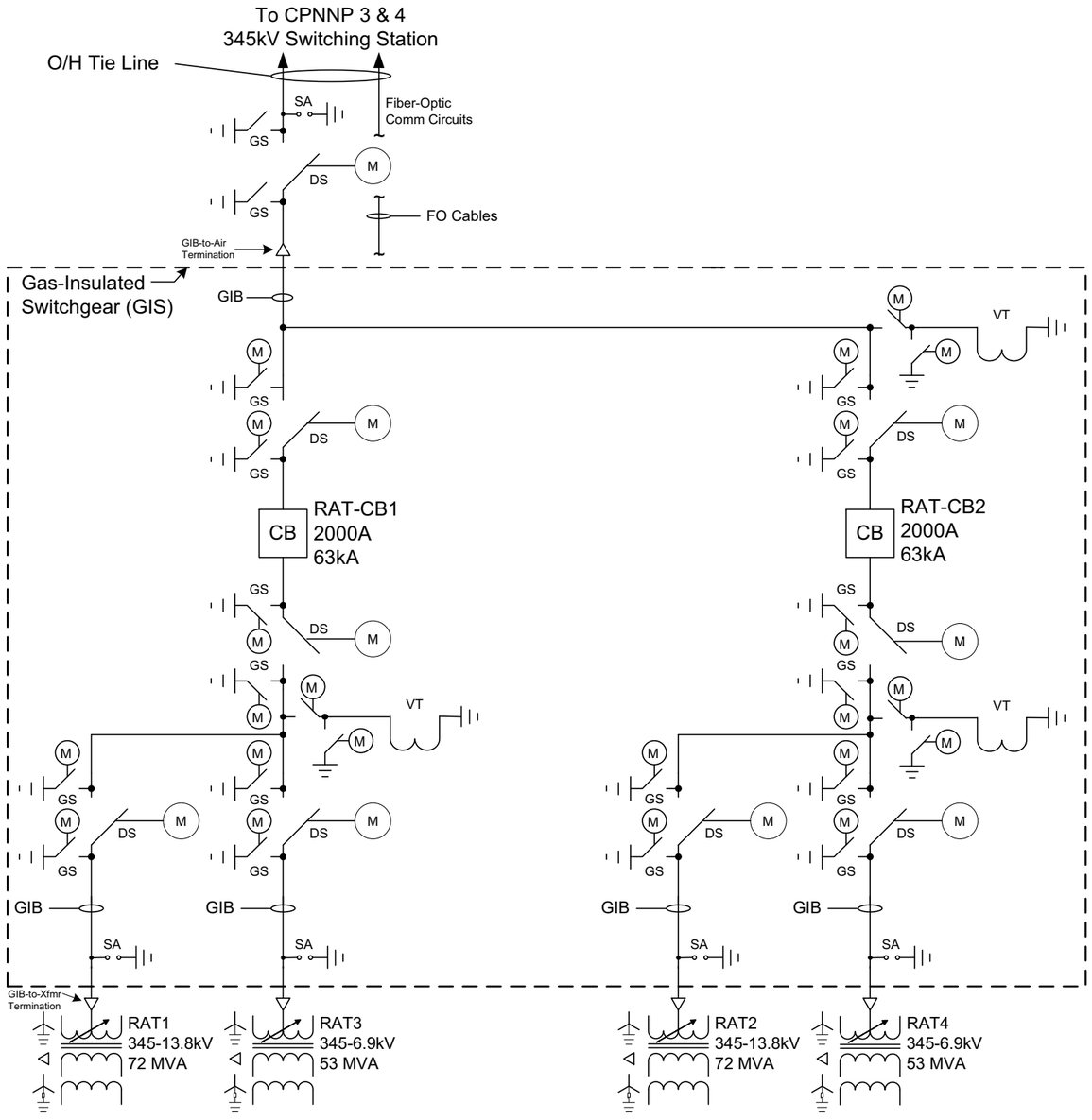
8.2.1.2.1 Switchyard

CP COL 8.2(3) Replace the content of DCD Subsection 8.2.1.2.1 with the following.

8.2.1.2.1.1 Plant Switching Station

The plant switching station is located approximately half a mile south-west from the plant-site, within the CPNPP property. From the plant switching station, there are four outgoing transmission lines going to remote switching stations, and four transmission tie lines going to the four unit switchyards. There are two control houses in the plant switching station. The control and protection equipment associated with the DeCordova and Johnson transmission lines and the two normal PPS transmission tie lines are located in control house #1. The control and protection equipment associated with the Parker and Whitney transmission lines and the two alternate PPS transmission tie lines are located in control house #2. The control and protection circuit cables that are routed in the yard and associates with two different control houses are physically separated to avoid a common cause failure of the two control houses and the availability of the associated offsite power circuits. The four outgoing transmission lines to remote switching stations and the four transmission tie lines to the unit switchyards are installed on separate sets of transmission towers and do not cross each other. Any credible failure of one PPS circuit, including catastrophic failure of transmission towers, is not cause the failed circuit or tower to fall into PPS circuit for the same unit. The plant switching station, including the transmission lines, towers, protection relay systems, control houses, etc. are not specifically designed for earthquake, tornado or flooding; however, they are designed to the applicable industry standards and regulations to assure a safe and highly reliable offsite power system. Each power circuit of the normal and alternate PPS, originating from the ERCOT transmission grid and terminating at the line-side of the medium-voltage bus incoming circuit breakers, is designed to withstand the effects of natural phenomena (excluding earthquake, tornado or flooding) and protected from dynamic effects, and has sufficient capacity and capability to assure satisfactory operation of all safety loads and non safety loads, under normal, abnormal and postulated accident conditions. Lightning protection system is also provided as discussed in Subsection 8.3.1.1.11.

The breakers in the plant switching station are arranged in a breaker-and-a-half scheme having six bays. Of the six bays, two bays are provided with three circuit breakers and the remaining four bays are provided with two circuit breakers. Provision is made for adding the third circuit breaker in the two-circuit breaker bays to accommodate future growth. All 345 kV circuit breakers have dual trip coils. The switching station main buses are constructed of six-inch aluminum

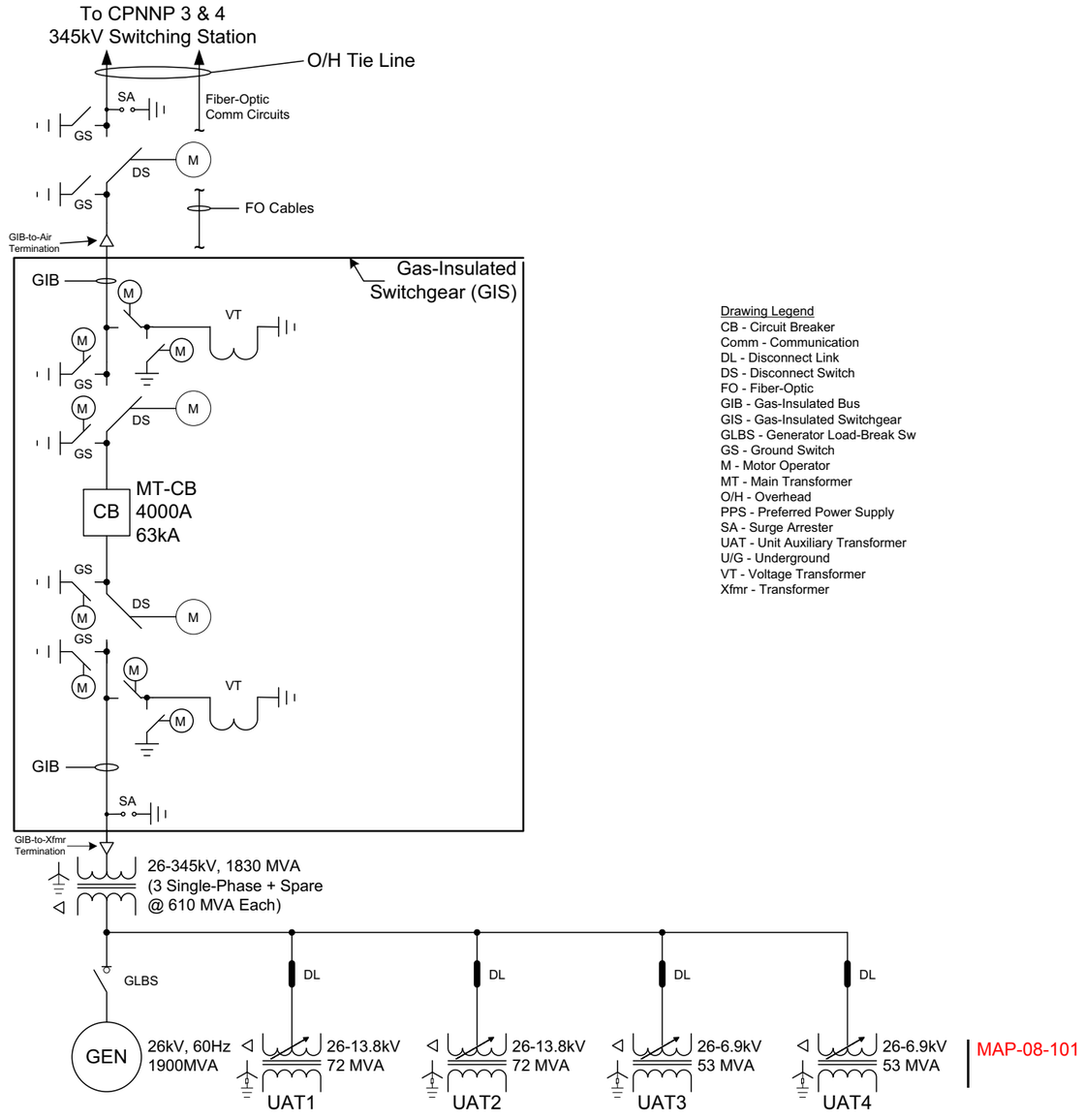


Drawing Legend
CB - Circuit Breaker
Comm - Communication
DS - Disconnect Switch
FO - Fiber-Optic
GIB - Gas-Insulated Bus
GIS - Gas-Insulated Switchgear
GS - Ground Switch
M - Motor Operator
O/H - Overhead
PPS - Preferred Power Supply
RAT - Reserve Auxiliary Transformer
SA - Surge Arrester
VT - Voltage Transformer
Xfmr - Transformer

MAP-08-101

CP COL 8.2(3)
CP COL 8.2(4)
CP COL 8.2(7)

Figure 8.2-203 Normal PPS Unit Switchyard One Line Diagram



Drawing Legend
CB - Circuit Breaker
Comm - Communication
DL - Disconnect Link
DS - Disconnect Switch
FO - Fiber-Optic
GIB - Gas-Insulated Bus
GIS - Gas-Insulated Switchgear
GLBS - Generator Load-Break Sw
GS - Ground Switch
M - Motor Operator
MT - Main Transformer
O/H - Overhead
PPS - Preferred Power Supply
SA - Surge Arrester
UAT - Unit Auxiliary Transformer
U/G - Underground
VT - Voltage Transformer
Xfmr - Transformer

CP COL 8.2(3)
CP COL 8.2(5)
CP COL 8.2(7)

Figure 8.2-204 Alternate PPS Unit Switchyard One Line Diagram

8.3 ONSITE POWER SYSTEMS

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

8.3.1.1 Description

CP COL 8.3(1) Replace the first sentence of the second paragraph in DCD Subsection 8.3.1.1 with the following.

The onsite ac power system is supplied offsite power from the 345 kV transmission system by two independent connections to the transmission system.

CP COL 8.3(1) Replace the seventh sentence of the second paragraph in DCD Subsection 8.3.1.1 with the following

The rated voltage of the high-voltage winding of the RAT is 345 kV.

8.3.1.1.9 Design Criteria for Class 1E Equipment

STD COL 8.3(3) Replace the last sentence of the ninth paragraph in DCD Subsection 8.3.1.1.9 with the followings.

Short circuit analysis for ac power system is addressed in Subsection 8.3.1.3.2. | MAP-08-104

8.3.1.1.11 Grounding and Lightning Protection System

~~STD~~CP COL 8.3(2) Replace the last paragraph in DCD Subsection 8.3.1.1.11 with the followings. | CTS-00908

The station ground grid and lightning protection system designs are based on soil resistivity data at CPNPP site, the maximum ground fault current level, ground fault clearing time, and the type and configuration of the structures to be

protected from lightning strikes. ~~Design specification will be provided and updated prior to procurement phase.~~ Design information will be provided and incorporated in the updated FSAR before the issuance of COL. CTS-00722

~~STD COL 8.3(3)~~ ~~Add the following new Subsection after the Subsection 8.3.1.2.2.~~ MAP-08-104

~~**8.3.1.3 Electrical Power System Calculations and Distribution System Studies**~~

~~Short circuit, load flow and voltage regulation studies are performed using the computer software program titled Electrical Transient Analyzer Program (ETAP) published by Operation Technology, Inc. The ETAP computer software program conforms to the requirements of 10 CFR Part 21; 10 CFR Part 50 Appendix B; and American Society of Mechanical Engineers (ASME) NQA-1.~~

~~These studies are performed to assure that the rated interrupting capacity of the circuit breakers are not exceeded, electrical equipment are adequately sized for worst case postulated operating conditions, and that available voltages at load terminals are within acceptable range. Major electrical equipment ratings, short circuit interrupting ratings of major circuit breakers, short circuit withstand rating of major electrical equipment are shown in Table 8.3.1-1. Acceptable voltage ranges for major electrical loads are shown in Table 8.3.1-2.~~

8.3.1.3.2 Short Circuit Studies MAP-08-104

STD COL 8.3(3) Replace the last two sentences of the first paragraph in DCD Subsection 8.3.1.3.2 with the followings.

As a result of the studies, maximum short circuit current has been confirmed to satisfy short circuit interrupt rating of circuit breakers indicated in Table 8.3.1-1.

8.3.1.3.4 Equipment Protection and Coordination Studies DCD_08.03.01-32

STD COL 8.3(10) Replace the last sentence of the first paragraph in DCD Subsection 8.3.1.3.4 with the followings.

Coordination of protective devices is confirmed as part of equipment procurement.

8.3.1.3.5 Insulation Coordination (Surge and Lighting Protection)

DCD_08.03.01-33

CP COL 8.3(11) Replace the last sentence of the first paragraph in DCD Subsection 8.3.1.3.5 with the followings.

Surge arresters are selected to be compatible with lightning impulse insulation level of the 345 kV offsite power circuit so that the insulation of onsite power system is assured from lightning surge.

8.3.2.1.1 Class 1E DC Power System

STD COL 8.3(8) Replace the last sentence of the third paragraph in DCD Subsection 8.3.2.1.1 with the followings.

Short circuit analysis for dc power system is addressed in Subsection 8.3.2.3.2. MAP-08-104

8.3.2.1.2 Non-Class 1E DC Power System

STD COL 8.3(8) Replace the last sentence of the fourth paragraph in DCD Subsection 8.3.2.1.2 with the followings.

Short circuit analysis for dc power system is addressed in Subsection 8.3.2.3.2. MAP-08-104

~~STD COL 8.3(8) Add the following new Subsection after the Subsection 8.3.2.2.2.~~ MAP-08-104

~~**8.3.2.3 Electrical Power System Calculations and Distribution System Studies**~~

~~Short circuit, load flow, voltage regulation, and equipment sizing calculations/studies are performed following guidance provided in Institute of Electrical and Electronics Engineers (IEEE) Standard 946 (Reference 8.3.2-1) and other referenced IEEE standards. These calculations/studies are performed using conservative criteria as indicated in the IEEE Standard 946. There are no continuously operating dc motors connected to the Class 1E dc systems. Hence,~~

~~the Class 1E dc bus short circuit calculations considered only batteries and battery charger contribution to the fault.~~

~~These studies are performed to assure that the rated interrupting capacity of the circuit protection devices are not exceeded, electrical equipment are adequately sized for worst case postulated operating conditions and that available voltages at load terminals are within acceptable range. Major dc electrical equipment ratings, short circuit ratings of dc switchboards, panelboards and circuit breakers are shown in Table 8.3.2-3. Acceptable voltage ranges for dc electrical loads are based on IEEE Standard 946.~~ MAP-08-104

8.3.2.3.2 Short Circuit Studies MAP-08-104

STD COL 8.3(8) Replace the last two sentences of the first paragraph in DCD Subsection 8.3.2.3.2 with the followings.

As a result of the studies, maximum short circuit current has been confirmed to satisfy short circuit interrupt rating of circuit breakers indicated in Table 8.3.2-3.

8.3.4 Combined License Information

Replace the content of DCD Subsection 8.3.4 with the following.

CP COL 8.3(1) ***8.3(1)*** *Transmission voltages*

This COL Item is addressed in Subsection 8.3.1.1 and in Table 8.3.1-1R.

~~STD~~CP COL 8.3(2) ***8.3(2)*** *Ground grid and lightning Protection* CTS-00908

This COL Item is addressed in Subsection 8.3.1.1.11.

STD COL 8.3(3) ***8.3(3)*** *Short Circuit analysis for ac power system*

This COL Item is addressed in Subsections 8.3.1.1.9 and 8.3.1.3.2. MAP-08-104

8.3(4) *Deleted from the DCD.*

8.3(5) *Deleted from the DCD.*

8.3(6) *Deleted from the DCD.*

8.3(7) *Deleted from the DCD.*

STD COL 8.3(8) ***8.3(8)*** *Short circuit analysis for dc power system*

This COL Item is addressed in Subsections 8.3.2.1.1, 8.3.2.1.2 and 8.3.2.3.2. MAP-08-104

8.3(9) *Deleted from the DCD.*

STD COL 8.3(10) ***8.3(10)*** *Equipment Protection and Coordination Studies* DCD_08.03.01-32

This COL Item is addressed in Subsection 8.3.1.3.4 .

CP COL 8.3(11) ***8.3(11)*** *Insulation Coordination (Surge and Lightning Protection)* DCD_08.03.01-33

This COL Item is addressed in Subsection 8.3.1.3.5.

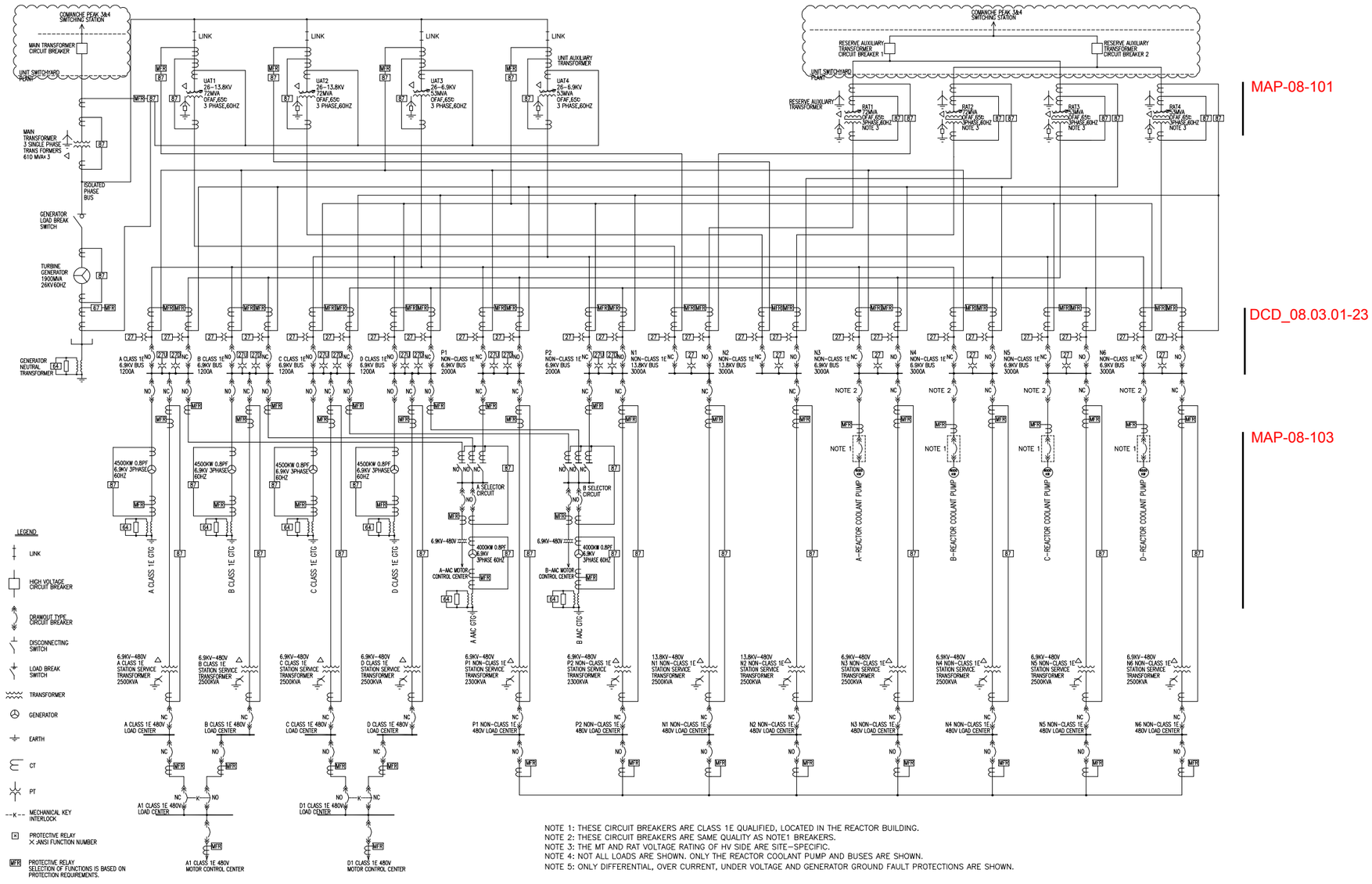
Table 8.3.1-1R (Sheet 1 of 3)
Electrical Equipment Ratings - Component Data Main AC Power System (Nominal Values)

	1.	Main Transformer (MT)		
		Quantity	Three single phase units (Besides one spare for the site)	
CP SUP 8.3(1)				
		MVA rating	1 phase 610MVA (3 phase 1830MVA)	
		Low voltage winding	26kV	
CP COL 8.3(1)		High voltage winding	345kV	
	2.	Unit Auxiliary Transformers (UATs)	UAT1, 2	UAT3, 4
		Quantity	Two 3 phase, 2 winding units	Two 3 phase, 2 winding units
		MVA rating	~~65~~72MVA	53MVA MAP-08-101
		Low voltage winding	13.8kV	6.9kV
		High voltage winding	26kV	26kV
		On-Load Tap Changer (OLTC)	Provided on high voltage side	Provided on high voltage side
	3.	Reserve Auxiliary Transformers (RATs)	RAT1, 2	RAT3, 4
		Quantity	Two 3 phase, 3 winding units (including delta tertiary winding)	Two 3 phase, 3 winding units (including delta tertiary winding)
		MVA rating	~~65~~72MVA	53MVA MAP-08-101
		Low voltage winding	13.8kV	6.9kV
CP COL 8.3(1)		High voltage winding	345kV	345kV
		On-Load Tap Changer (OLTC)	Provided on high voltage side	Provided on high voltage side
	4.	Generator Load Break Switch (GLBS)		
		Rated Voltage	Over 27.3kV	
		Rated Current	Over 44.4kA	
		Rated Frequency	60Hz	

MAP-08-101

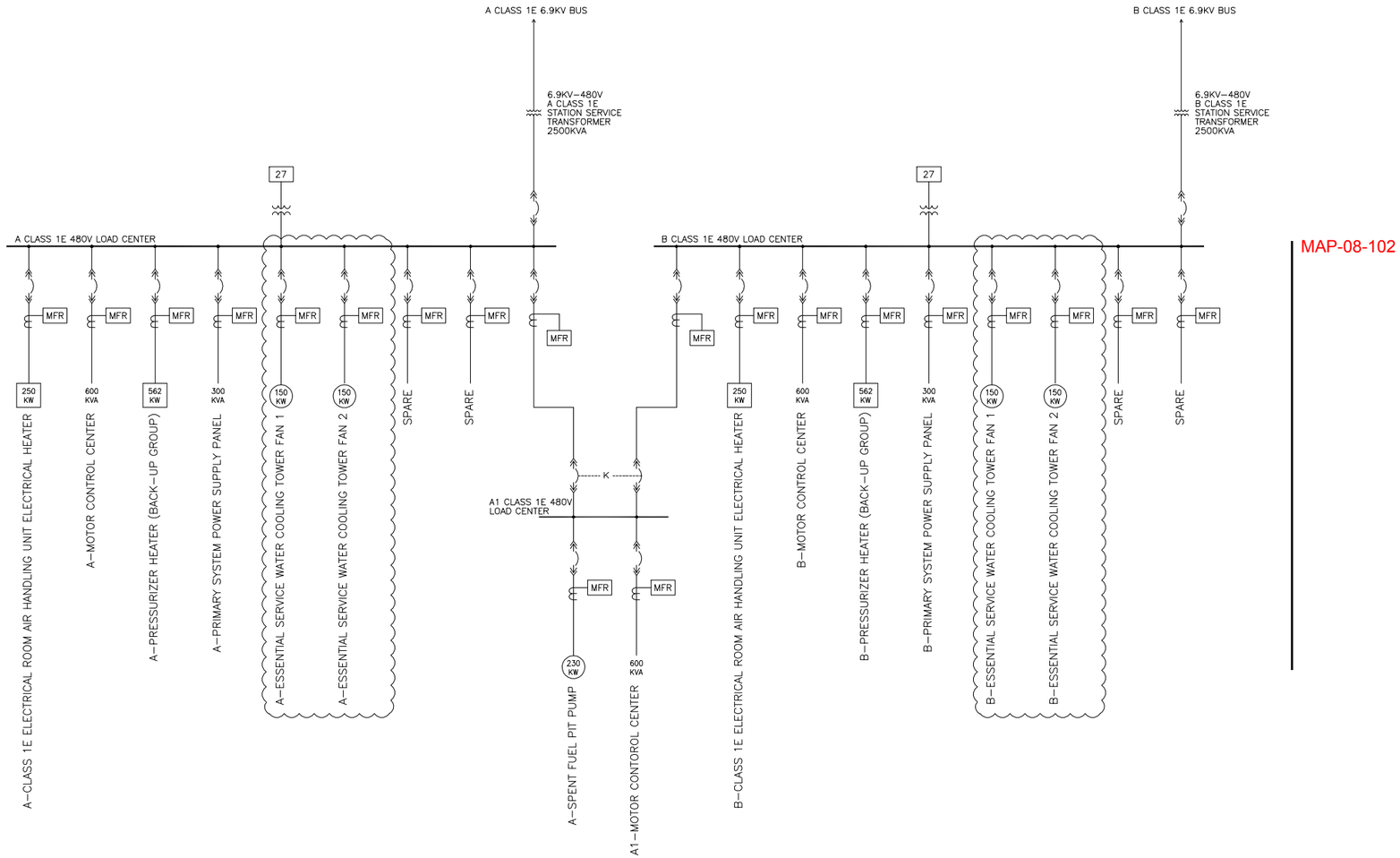
DCD_08.03.01-23

MAP-08-103



CP COL 8.2(3)

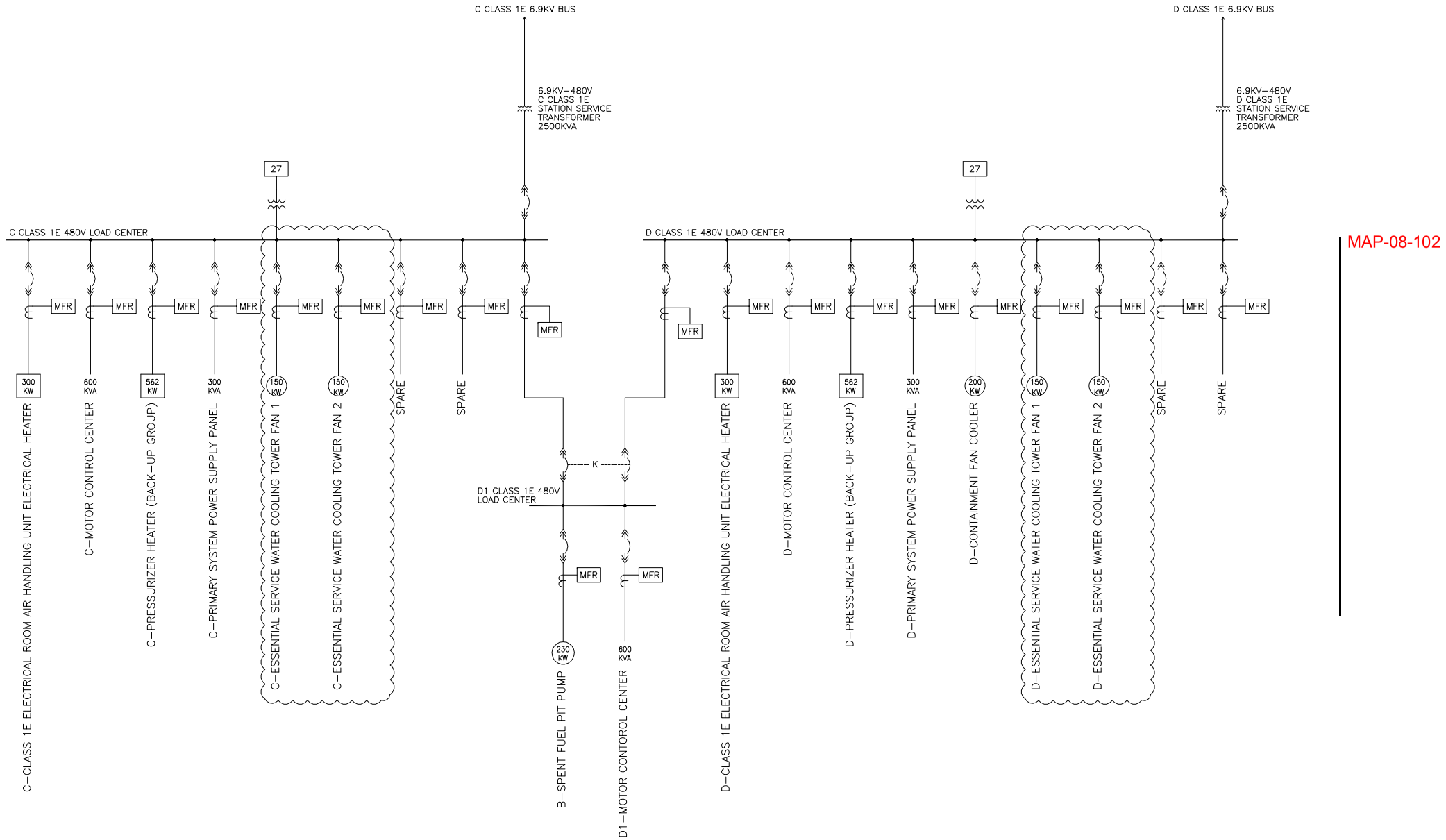
Figure 8.3.1-1R Onsite AC Electrical Distribution System (Sheet 1 of 7)
Main One Line Diagram



MAP-08-102

CP COL 9.2(20)

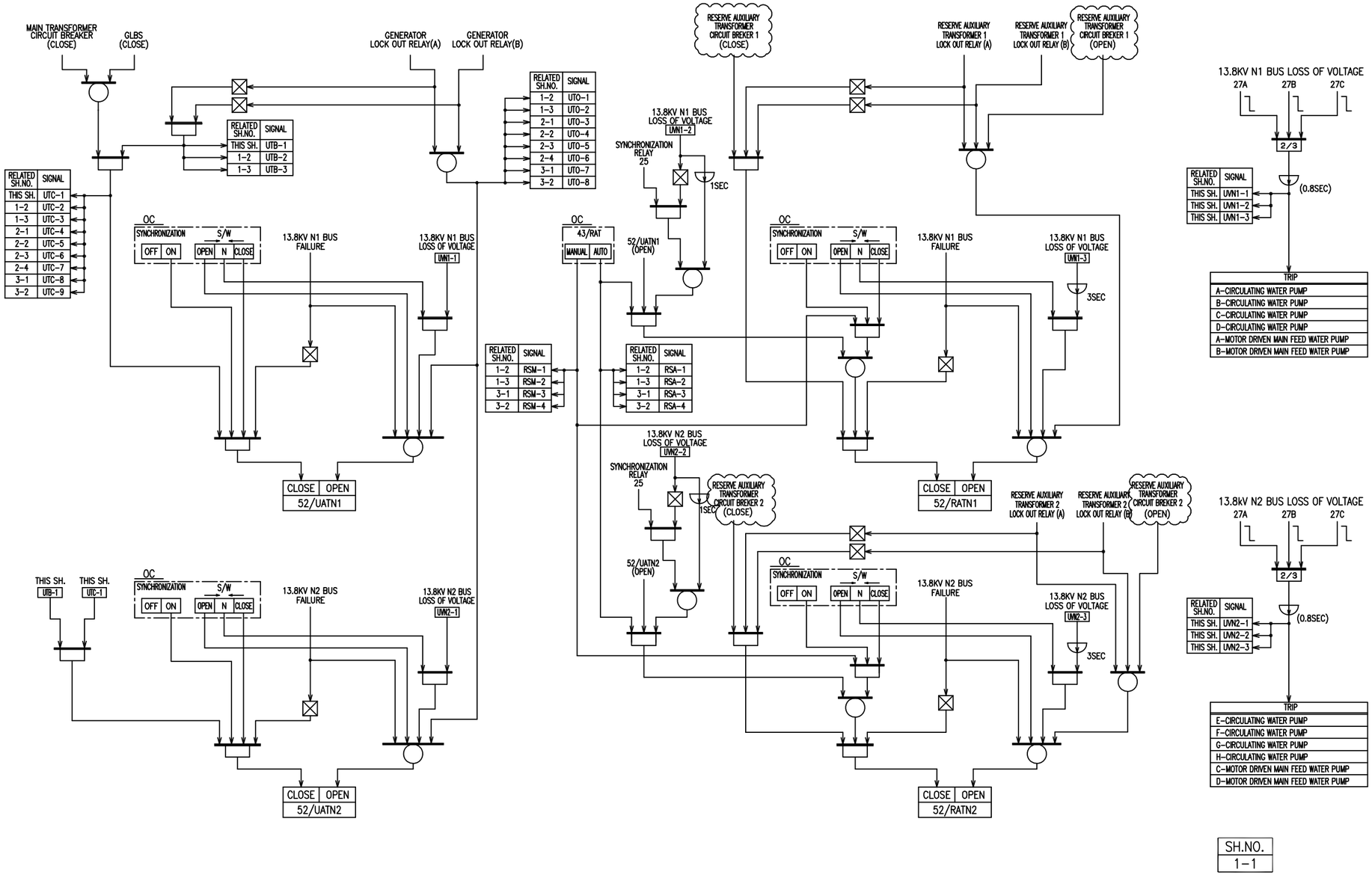
Figure 8.3.1-1R Onsite AC Electrical Distribution System (Sheet 5 of 7)
Class 1E 480V Buses A and B One Line Diagram



MAP-08-102

CP COL 9.2(20)

Figure 8.3.1-1R Onsite AC Electrical Distribution System (Sheet 6 of 7)
Class 1E 480V Buses C and D One Line Diagram



DCD_08.03.01-23

CP COL 8.2(3)

Figure 8.3.1-2R Logic Diagrams (Sheet 3 of 24)
Non-Class 1E 13.8kV Incoming Circuit Breaker Tripping and Closing

Chapter 9

Chapter 9 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00586	9.2.1.2.1	9.2-1 9.2-2	Consistent with Subsection 9.4.5.2.6	Change “ESWP house” to “UHS ESW pump house”.	0
CTS-00608	9.4	9.4-7	Erratum	Change heating coil capacity of EFP (M/D) Area Air Handling Unit from “1 kW” to “2 kW”.	0
DCD_09.05.01-6	9.5.1.3 9.5.9	9.5-3 9.5-18	DCD_RAI 09.05.01-6	Add Subsection 9.5.1.3.	0
DCD_09.05.01-15	Table 9.5.1-1R	9.5-46	DCD_RAI 09.05.01-15	Add LMNs in Table 9.5.1-1R and Table 9.5.1.2R.	0
DCD_09.05.01-7	Table 9.5.1-1R	9.5-55	DCD_RAI 09.05.01-7	Add “see Subsection 9.5.1.3” to Table 9.5.1.1R.	0
DCD_09.05.01-5	Table 9.5.1-1R	9.5-56	DCD_RAI 09.05.01-5	Fill in Remarks on Table 9.5.1-1R.	0
DCD_09.05.01-15	Table 9.5.1-2R	9.5-112 9.5-113	DCD_RAI 09.05.01-15	Add LMNs in Table 9.5.1-1R and Table 9.5.1.2R.	0
DCD_09.02.04-1	9.2.10	9.2-12	Reflect Response to DCD RAI No. 125	Revised text in CP COL 9.2(10) for clarity.	3
DCD_09.02.04-2	9.2.10	9.2-13	Reflect Response to DCD RAI No. 125	Revised text in CP COL 9.2(16) for clarity.	3
DCD_09.02.01-4	9.2.1.2.1	9.2-1	Reflect Response to DCD RAI No. 326-2279, Question 4	Add a paragraph to CP COL 9.2(7) to define boundary between safety-related and non-safety-related boundary of the ESW as the vent and drain valves of the strainers and heat exchangers	5
DCD_09.02.01-17	9.2.1.2.1	9.2-1	Reflect Response to DCD RAI 326-2279, Question 17	Add CP COL 9.2(26) to identify maintenance and test procedures to monitor and flush out debris shall be implemented.	5
DCD_09.02.01-30	9.2.1.2.1	9.2-1	Reflect Response	Add CP COL 9.2(25) to	5

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			to DCD RAI 326-2279, Question 30	clarify proper filling and venting procedures to prevent water hammer.	
DCD_09.02.01-30	9.2.1.3	9.2-2	Reflect Response to DCD RAI 326-2279, Question 30	Add second paragraph to COL 9.2(1) description of recovery procedures in the event that the UHS approaches low water level.	5
DCD_09.02.01-30	9.2.10	9.2-11	Reflect Response to DCD RAI 326-2279, Question 30	Add at the end of CP COL 9.2(1) “and recovery procedures when UHS approaches low water level.”	5
DCD_09.02.01-30	9.2.12	9.2-12	Reflect Response to DCD RAI 326-2279, Question 30	Revise CP COL 9.2(8) to read “The specific ESW chemistry requirements”	5
DCD_09.02.01-12,13,14,30	9.2.10	9.2-14	Reflect Response to DCD RAI 326-2279, Question 12,13,14 and 30	Add 9.2(25) The operating and maintenance procedures to address water hammer issues. This COL item is addressed in Subsections 9.2.1.2.1 and 13.5.2.1.	5
DCD_09.02.01-17	9.2.10	9.2-14	Reflect Response to DCD RAI 326-2279, Question 17	Add 9.2(26) Maintenance and test procedures to monitor and flush out debris. This COL item is addressed in Subsections 9.2.1.2.1 and 13.5.2.1	5
RCOL2_09.05.01-1	9.5.1.6.2.1.5	9.5-9	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added clarification for retention of training records.	-
RCOL2_09.05.01-2	9.5.1.6.5	9.5-14	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added clarification on the QA program for fire protection.	-
RCOL2_09.05.01-	9.5.1.6.4.2.1	9.5-11	Response to RAI	Added clarification on	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
3			No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	design control procedures.	
RCOL2_09.05.01-4	9.5.1.6.4	9.5-10	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added Clarification on records retention for fire protection related changes in facility, procedures, tests and experiments.	-
RCOL2_09.05.01-5	9.5.1.6.4.2.1	9.5-12	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added clarification for when the applicant opts to change or modify the FP program without seeking prior NRC approval	-
RCOL2_09.05.01-6	9.5.1.6.4.2.2	9.5-12	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Provided clarification on notification requirements.	-
RCOL2_09.05.01-8	9.5.1.6.4.2.4	9.5-13	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Provided clarification for the storage of unused ion exchange resins or hazardous chemicals used in safety-related areas.	-
RCOL2_09.05.01-8	9.5.10	9.5-19	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added reference 9.5.1-207	-
RCOL2_09.05.01-9	9.5.1.6.4.2.4	9.5-13	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added bullet to address fire prevention element reviews.	-
RCOL2_09.05.01-11	9.5.1.6.4.2.1	9.5-12	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Revised subsection to clarify that the fire protection program includes fire risk evaluations in accordance with applicable codes and standards.	-
RCOL2_09.05.01-12	9.5.1.6.4.2.5	9.5-13	Response to RAI No.10 Luminant Letter	Revised subsection to include a detailed description of the ignition	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			no. TXNB-09030 Date 8/11/2009	sources control procedures	
RCOL2_09.05.01-13	9.5.1.6.4.2.4	9.5-13	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Provided clarification on debris removal and housekeeping.	-
RCOL2_09.05.01-14	9.5.1.6.4.2.8	9.5-14	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added new Subsection 9.5.1.6.4.2.8, "Fire Protection System Maintenance and Impairments" to address Regulatory Position 2.4 of RG 1.189.	-
RCOL2_09.05.01-15	9.5.1.2.2	9.5-2	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Revised subsection to reference NFPA 22	-
RCOL2_09.05.01-15	9.5.10	9.5-19	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added reference 9.5.1-208	-
RCOL2_09.05.01-16	9.5.10	9.5-19	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Added reference 9.5.1-209	-
RCOL2_09.05.01-17	9.5.1.6.1.6	9.5-5	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Subsection revised to clarify that the fire team leader has ready access to keys for any locked doors.	-
RCOL2_09.05.01-17	Table 9.5.1-1R	9.5-39	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Table 9.5.1-1R at Position Number 3.5.1 is revised to say "See Subsection 9.5.1.6.1.6" in the Remarks column.	-
RCOL2_09.05.01-18	9.5.1.6.1.8	9.5-7	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Subsection revised to clarify that at least 10 self-contained breathing apparatus (SBA) masks are available for fire brigade use.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_09.05.01-19	9.5.1.6.4.2.4	9.5-13	Response to RAI No.10 Luminant Letter no. TXNB-09030 Date 8/11/2009	Revised first bullet to include NFPA 55	-
DCD_09.01.02-21	9.1.2 9.1.6	9.1-1 9.1-2	Reflect Response to DCD RAI No.387.	Added Subsection 9.1.2 to state that an inspection of the fuel racks will be performed prior to fuel load. Added CP COL 9.1(9) The establishment of an inspection procedure of spent fuel rack integrity.	7
DCD_09.01.01-10	9.1.2.2.2 9.1.6	9.1-1 9.1-2	Reflect Response to DCD RAI No.247.	Deleted Subsection 9.1.2.2.2 from COLA. Deleted CP COL 9.1(1) from the COLA.	7
DCD_09.01.05-12	9.1.5 9.1.6	9.1-1 9.1-2	Reflect Response to DCD RAI No.292	Added Subsection 9.1.5 Added CP COL 9.1(6) The establishment of an Overhead Heavy Load Handling Program	7
DCD_09.02.01-4	9.2.1.2.1	9.2-1	Response to DCD RAI 326-2279, Question 4	Removed blowdown description from CP COL 9.2(7) and added the description as the second paragraph of CP COL 9.2(8)	7
CTS-00848	9.2.1.2.1	9.2-2	Editorial correction	Revise CP COL 9.5(2) to read," Replace the last paragraph in DCD Subsection 9.2.1.2.1 with the following."	7
DCD_09.02.01-27	9.2.1.3	9.2-3	Response to DCD RAI 326-2279, Question 27	Added second paragraph to CP COL 9.2(7)to identify that specific design details are described in Subsections 9.2.5.2.3 and 9.2.5.3	7
DCD_09.02.02-26 DCD_09.02.02-37	9.2.2.2.2	9.2-4	Reflect response to DCD RAI 362-2278, Questions 26 and 37.	Add STD COL 9.2(27) to replace the last paragraph in Subsection 9.2.2.2.2.	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
DCD_09.02.02-26 DCD_09.02.02-37	9.2.10	9.2-15	Reflect response to DCD RAI 362-2278, Questions 26 and 37.	Add STD COL 9.2(27) as follows: 9.2(27) Operating and maintenance procedures for water hammer prevention. This COL item is addressed in Subsection 9.2.2.2.2.6.	7
DCD_09.02.02-11	9.2.5.5	9.2-12 9.2-15	Reflect response to DCD RAI 343	Add STD COL 9.2(27) as follows STD COL 9.2(27) 9.2.7.2.1 Essential Chilled Water System Replace the last paragraph in DCD Subsection 9.2.7.2.1 with the following. The operating and maintenance procedures regarding water hammer are included in system operating procedures in Subsection 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.	7
DCD_09.04.05-4	Table9.4-201 (Sheet 1 of 2)	9.4-7	Reflect response to DCD RAI 343	Cooling coil capacity of Non-Class 1E Electrical Room Air Handling Unit is revised from 1,520,000 Btu/hr to 1,330,000 Btu/hr. Heating coil capacity of Class 1E Electrical Room Air Handling Unit is revised from 90kW to 37kW (Train A and B), from 101 kW to 55kW (Train C and D), respectively.	7
MAP-09-101	Table9.4-201 (Sheet 1-2 of 2)	9.4-7 9.4-8	Reflect layout change in DCD Rev.2	Heat Coil Capacity of Main Steam /Feedwater Piping Air Handling Unit from 8kW to 9kW. Heat Coil Capacity of	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				Safeguard Component Area Air Handling Unit is revised from 21kW to 24kW. Penetration Area Air Handling Unit Heating Coil Capacity is revised from 27 kW to 29kW. Annulus Emergency Filtration Unit Area Air Handling Unit Heating Coil Capacity is revised from 9kW to 10kW. Charging Pump Area Air Handling Unit Heating Coil Capacity is revised from 3 kW to 6kW.	
MAP-09-102	Table9.4-201 (Sheet 2 of 2)	9.4-8	Consistent with DCD Rev.2	Add “SFP Pump Area Air Handling Unit Heating Coil Capacity : 5 kW” following Essential Chiller Unit Area Air Handling Unit Heating Coil Capacity.	7
DCD_09.05.04-28	9.5.2.3 9.5.9	9.5-21 9.5-22	Reflect response to DCD RAI 318	Add CP COL 9.5(11) as follows; Replace the second sentence of the seventh paragraph in DCD Subsection 9.5.4.3 with the following. Fuel oil is normally brought in by tank truck for recharging the storage tank. Additionally, if circumstances require, railroad tank cars can be brought in on the site railroad spur. The CPNPP Units 3 and 4 are located approximately 90 miles southwest of the Dallas - Ft. Worth area. Dallas - Ft. Worth is a major	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				commercial area which has distributors of diesel fuel that represent the majority of the major oil companies. The cities, such as Houston, Beaumont etc, within 300 miles from site are capable of supplying diesel fuel oil within seven days.	
CTS-00480	Figure 9.5.1-202	9.5-149	Update	Figure 9.5.1 “CP NPP Units 3 and 4 Fire Main System” is updated.	7

9.0 AUXILIARY SYSTEMS

9.1 FUEL STORAGE AND HANDLING

This section of the referenced design control document (DCD) is incorporated by reference with the following departures and/or supplements.

9.1.2 New and Spent Fuel Storage

DCD_09.01.02-21

CP COL 9.1(9) A procedure that will instruct the operator to perform formal inspection of the integrity of the spent fuel racks will be established prior to first fuel load.

~~9.1.2.2.2 Spent Fuel Storage~~

DCD_09.01.01-10

~~CP COL 9.1(1) Replace the first sentence of sixteenth paragraph in DCD Subsection 9.1.2.2.2 with the following.~~

~~Detailed procedures will be prepared for the coupon measurements, prior to fuel load. The pre-characterization and in-service characterization of the coupons involves the same testing. Acceptance criteria for the irradiated coupons will be established as part of the surveillance program development. As a minimum, testing criteria includes mechanical and geometrical properties, weight and specific gravity, and visual examination and imaging.~~

9.1.5 Overhead Heavy Load Handling System

DCD_09.01.05-12

CP COL 9.1(6) To assure proper handling of heavy loads during the plant life, a Heavy Load Handling Program, including associated procedural and administrative controls, will be established prior to first fuel load. The program will satisfy commitments made in Subsection 9.1.5 of the DCD, and meet the guidance of ANSI/ASME B30.2, ANSI/ASME B30.9, ANSI N14.6, ASME NOG-1, CMMA Specification 70-2000, NUREG-0554, NUREG-0612, and NUREG-0800, Section 9.1.5. The Heavy Load Handling Program will include consideration of temporary cranes and hoists. The Heavy Load Handling Program will adopt a defense-in-depth strategy to enhance safety when handling heavy loads. For instance, the program will restrict lift heights to practical minimums and limit lifting activities as much as practical to plant modes in which load drops have a small potential for adverse consequences, particularly when critical loads are being handled. Further, prior to

the lifting of heavy loads after initial fuel loading, the program will institute additional reviews to assure that potential drops of these loads due to inadvertent operations or equipment malfunctions, separately or in combination, will not jeopardize safe shutdown functions, cause a significant release of radioactivity, a criticality accident, or inability to cool fuel within the reactor vessel or spent fuel pit. DCD_09.01.05-12

9.1.6 Combined License Information

Replace the content of DCD Subsection 9.1.6 with the following.

CP COL 9.1(1)

9.1(1) ~~*A sample coupon monitoring program for neutron absorbing material*~~*Deleted from the DCD.* DCD_09.01.01-10

~~*This COL item is addressed in* Subsection 9.1.2.2.2.~~

9.1(2) *Deleted from the DCD.*

9.1(3) *Deleted from the DCD.*

9.1(4) *Deleted from the DCD.*

9.1(5) *Deleted from the DCD.*

9.1(6) ~~*Deleted from the DCD.*~~*The establishment of a Heavy Load Handling Program* DCD_09.01.05-12

This COL item is addressed in Subsection 9.1.5.

9.1(7) *Deleted from the DCD.*

9.1(8) *Deleted from the DCD.*

CP COL 9.1(9)

9.1(9) *The establishment of an inspection procedure of spent fuel rack integrity* DCD_09.01.05-21

This COL item is addressed in Subsection 9.1.2.

9.2 WATER SYSTEMS

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

9.2.1.2.1 General Description

CP COL 9.2(7) Replace the first sentence of the first paragraph in DCD Subsection 9.2.1.2.1 with the following.

Figure 9.2.1-1R shows the piping and instrumentation diagrams (P&IDs) of the essential service water system (ESWS).

CP COL 9.2(25) Replace the eighth paragraph in DCD 9.2.1.2.1 with the following: DCD_09.02.01-12

Proper filling and venting procedures are followed to minimize the occurrence of water hammer and mitigate its effects. These are included in the Operating and Maintenance Procedures mentioned in Subsection 13.5.2.1 DCD_09.02.01-30

CP COL 9.2(8) Replace the sixth paragraph in DCD Subsection 9.2.1.2.1 with the following.

Chemicals are added to the basin to control corrosion, scaling, and biological growth. The water chemistry is managed through a Chemistry Control Program such as following a standard Langelier Saturation Index. The chemical injection system is described in Subsection 10.4.5.

Blowdown is used to maintain acceptable water chemistry composition. This is accomplished by tapping each essential service water pump (ESWP) discharge header. Additional description about blowdown is discussed in Subsection 9.2.5. DCD_09.02.01-4

CP COL 9.2(7) Replace the seventh paragraph in DCD Subsection 9.2.1.2.1 with the following.

The non-safety-related portion of the ESWS begins at the discharge side of the strainer and CCW heat exchangers vent and drain valves. The positions of these valves are controlled by the Operating and Maintenance Procedures mentioned in Subsection 13.5.2.1 in order to maintain water-tight conditions and prevent inadvertent draining of the ESW. DCD_09.02.01-4

~~Blowdown is used to maintain acceptable water chemistry composition. This is accomplished by tapping each essential service water pump (ESWP) discharge header. Additional description about blowdown is discussed in Subsection 9.2.5~~. DCD_09.02.01-4

CP COL 9.2(26) Replace the fourteenth paragraph in DCD 9.2.1.2.1 with the following: DCD_09.02.01-17

Maintenance and test procedures (see Operating and Maintenance Procedures in Subsection 13.5.2.1) are followed to monitor and flush debris accumulated in the system. DCD_09.02.01-17

CP COL 9.5(2) ~~Add the following text after~~Replace the last paragraph in DCD Subsection 9.2.1.2.1 with the following. CTS-00848

Each of the essential service water (ESW) lines in the reactor building (R/B) and in the ~~ESWP~~UHS ESW pump house is tapped to supply water to the fire protection water supply system (FSS), if required, after the safe-shutdown earthquake (SSE). Manually operated locked closed valves are provided in each of the tapped connections to draw water for the FSS. CTS-00586

9.2.1.2.2 Component Description

CP COL 9.2(6) Replace the sentence in DCD Subsection 9.2.1.2.2 with the following.

Table 9.2.1-1R shows the design parameters of the major components in the system.

9.2.1.2.2.1 ESWPs

CP COL 9.2(6) Replace the second sentence of the third paragraph in DCD Subsection 9.2.1.2.2.1 with the following.

Total dynamic head of the ESWP is 220 feet. Available net positive suction head (NPSH) with the lowest expected water level (after 30 days of accident mitigation) in the basin is approximately 40 feet.

9.2.1.3 Safety Evaluation

CP COL 9.2(1) Replace the eleventh paragraph in DCD Subsection 9.2.1.3 with the following.

Design of the basin provides adequate submergence of the pumps to assure the NPSH for the pumps. The basin is divided into two levels. One is approximately 12 feet lower than the other, and directly above it is installed the ESWP. The ESWP is designed to operate with the lowest expected water level (after 30 days of accident mitigation). The basins have sufficient water inventory to assure adequate cooling and NPSH for 30 days without makeup. This is discussed further in Subsection 9.2.5.

Recovery procedures contained in the Operating and Maintenance Procedures (see Subsection 13.5.2.1) are implemented if the UHS approaches low water level. DCD_09.02.01-30

CP COL 9.2(2) Replace the twelfth paragraph in DCD Subsection 9.2.1.3 with the following.

The lowest ambient temperature anticipated at the site does not result in the freezing of the ESW in the basin or the piping for the following reasons:

- The basins are located below grade and thus ground temperature maintains water from freezing.
- In the operating trains, water is continuously circulated which helps to prevent freezing. Ultimate heat sink (UHS) transfer pumps can be used to circulate water from the idle basins.
- ~~ESWP~~UHS ESW pump house ventilation system maintains pre determined minimum temperature in the pump house areas. This is further described in Subsection 9.4. CTS-00586
- Any exposed essential piping that may be filled with water while the pump is not operating is heat traced.

For the thermal overpressure protection of the component cooling water heat exchanger ESW side, the valves located at the component cooling water heat exchanger ESW side inlet and outlet lines are administratively locked open valves. These locked open valves assure protection from the thermal overpressurization due to the erroneous valve operation coincident with the heat input from the component cooling water (CCW) side to ESW side.

CP COL 9.2(7) Replace the last two paragraphs in DCD Subsection 9.2.1.3 with the following. DCD_09.02.01-27

The ESWS serves as a backup source of water for the FSS in the R/B and in the ESWP house. This is in conformance with the requirement for an alternative fire protection water supply from a seismic category I water system in the event of a safe-shutdown earthquake, in accordance with RG 1.189. Two hose stations at approximately 150 gpm total take water from the ESWS for a maximum of two hours. Approximately 18,000 gallons is consumed by the FSS. This water volume has minimal impact on the UHS water inventory and does not jeopardize the 30 day capacity requirement. Administratively locked closed valves in each of the fire protection water supply taps assure that water inventory loss is controlled.

Specific design conditions such as maximum operating water temperature and required UHS water volume are described in detail in Subsections 9.2.5.2.3 and 9.2.5.3. DCD_09.02.01-27

9.2.1.5.4 ESWP motor essential service water flow

CP COL 9.2(7) Replace the content of DCD Subsection 9.2.1.5.4 with the following.

Not applicable to Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4.

9.2.2.2.2 System Operation

DCD-09.02.02-26
DCD_09.02.02-37

STD COL 9.2(27) Replace the last paragraph in DCD Subsection 9.2.2.2.2 with the following.

The operating and maintenance procedures regarding water hammer are included in system operating procedures in Section 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.

9.2.4.1 Design Bases

CP COL 9.2(10) Replace the first and second bullet in DCD Subsection 9.2.4.1 with the following.

- The potable water system for CPNPP is designed to receive water from Somervell County Water District. The potable and sanitary water system pipes are fitted with backflow preventer to avoid chemical contamination. They are also physically separated from any radioactive sources, to prevent contamination. This assures that the water remains fit for human consumption and conforms to the requirements of GDC 60 (Reference 9.2.11-1).

- The receipt of potable water from Somervell County Water District conforms to the requirements of the Environmental Protection Agency "National Primary Drinking Water Standards," 40 CFR 141 (Reference 9.2.11-4). All state and local environmental protection standards are applied and followed, as these may be more stringent than federal requirements.

CP COL 9.2(9) Replace the fourth bullet in DCD Subsection 9.2.4.1 with the following.

- The supply capacity of potable water is 50 gpm (approximately 70,000 gpd), sufficient to provide a quantity of potable water based on 20 gpd for approximately 3500 persons expected to be at the station during a 24-hour period of power generation or outages. No onsite potable water storage tank is required.

CP COL 9.2(12) Replace the eighth bullet in DCD Subsection 9.2.4.1 with the following.

Manholes, handholes, inspection ports, ladder, and platforms are provided, as required, for periodic inspection of system components.

9.2.5.5 Instrumentation Requirements

CP COL 9.2(24) Replace the sentence in DCD Subsection 9.2.5.5 with the following.

Water level in each of the basins is controlled by level instrumentation that opens or closes the automatic valves in the makeup lines.

Two level transmitters and associated signal processors are provided for each basin to indicate water level in the basin and annunciate in the MCR for both the high and low water levels in the basin.

A water level signal at six inches below the normal water level causes the makeup water control valve to open. A signal at normal water level then causes the makeup control valve to close. A low level alarm annunciates in the MCR whenever the water level falls one foot below the normal water level.

During accident condition, level indications from the operating basins are used to alert the MCR operator to start the UHS transfer pump to transfer water from the idle basin to the operating basins.

Blowdown rate is controlled manually. The blowdown control valves close automatically upon receipt of a low water level signal or emergency core cooling system actuation signal. The valve is designed to fail in the close position. Failure of the valve to close is indicated in the MCR.

The conductivity cells are provided at the ESW pump discharge line and conductivity are indicated in the MCR.

Temperature elements are provided in each basin and temperatures are indicated in the MCR.

Local flow rate and pressure indicators located in each UHS transfer pump discharge header are used for pump performance testing.

The cooling tower fan is equipped with vibration sensors that alarm in the control room in the event of high vibration.

9.2.7.2.1 Essential Chilled Water System

DCD_09.02.02-11

STD COL 9.2(27) Replace the last paragraph in DCD Subsection 9.2.7.2.1 with the following.

The operating and maintenance procedures regarding water hammer are included in system operating procedures in Subsection 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.

CP COL 9.2(21) ***9.2(21)*** *The source of makeup water to the UHS and the blowdown discharge location*

This COL item is addressed in Subsections 9.2.5.2.

CP COL 9.2(22) ***9.2(22)*** *The UHS capability and safety evaluation*

This COL item is addressed in Subsection 9.2.5.3 and Table 9.2.5-202.

CP COL 9.2(23) ***9.2(23)*** *The test and inspection requirements of the UHS*

This COL item is addressed in Subsection 9.2.5.4.

CP COL 9.2(24) ***9.2(24)*** *The required alarms, instrumentation and controls of the UHS system*

This COL item is addressed in Subsection 9.2.5.5.

CP COL 9.2(25) ***9.2(25)*** *The operating and maintenance procedures to address water hammer issues* DCD_09.02.01-12,13,14,30

This COL item is addressed in Subsections 9.2.1.2.1 and 13.5.2.1.

CP COL 9.2(26) ***9.2(26)*** *Maintenance and test procedures to monitor and flush out debris* DCD_09.02.01-17

This COL item is addressed in Subsections 9.2.1.2.1 and 13.5.2.1.

STD COL 9.2(27) ***9.2(27)*** *Operating and maintenance procedures of water hammer prevention* DCD_09.02.02-26

This COL Item is addressed in Subsection 9.2.2.2.2.6 and 9.2.7.2.1. DCD_09.02.02-37

DCD_09.02.02-11

CP COL 9.4(4)

Table 9.4-201 (Sheet 1 of 2)

Equipment Design Data

Main Control Room Air Handling Unit		
Heating Coil Capacity	37 kW	
Auxiliary Building Air Handling Unit		
Cooling Coil Capacity	9,200,000 Btu/hr	
Heating Coil Capacity	4,750,000 Btu/hr (Steam)	
Non-Class 1E Electrical Room Air Handling Unit		
Cooling Coil Capacity	~~1,520,000~~1,330,000 Btu/hr	DCD_09.04.05-4
Heating Coil Capacity	Non heating	
Main Steam / Feedwater Piping Area Air Handling Unit		
Cooling Coil Capacity	450,000 Btu/hr	
Heating Coil Capacity	~~8~~9 kW	MAP-09-101
Technical Support Center Air Handling Unit		
Cooling Coil Capacity	550,000 Btu/hr	
Heating Coil Capacity	30 kW	
Class 1E Electrical Room Air Handling unit		
Heating Coil Capacity	~~90~~37 kW - Train A, B ~~101~~55 kW - Train C, D	DCD_09.04.05-4
Safeguard Component Area Air Handling Unit		
Heating Coil Capacity	~~21~~24 kW	MAP-09-101
Emergency Feedwater Pump (M/D) Area Air Handling Unit		
Heating Coil Capacity	~~1~~2 kW	CTS-00608
Emergency Feedwater Pump (T/D) Area Air Handling Unit		
Heating Coil Capacity	4.5 kW	

CP COL 9.4(4)

Table 9.4-201 (Sheet 2 of 2)

Equipment Design Data

Safety Related Component Area Air Handling Unit		
Penetration Area Air Handling Unit Heating Coil Capacity	~~27~~29 kW	MAP-09-101
Annulus Emergency Filtration Unit Area Air Handling Unit Heating Coil Capacity	~~9~~10 kW	MAP-09-101
Charging Pump Area Air Handling Unit Heating Coil Capacity	~~3~~6 kW	MAP-09-101
CCW Pump Area Air Handling Unit Heating Coil Capacity	3 kW	
Essential Chiller Unit Area Air Handling Unit Heating Coil Capacity	4.5 kW	
SFP Pump Area Air Handling Unit Heating Coil Capacity	5 kW	MAP-09-102
Containment Low Volume Purge Air Handling Unit		
Cooling Coil Capacity	190,000 Btu/hr	
Heating Coil Capacity	30 kW	
Containment High Volume Purge Air Handling Unit		
Cooling Coil Capacity	2,820,000 Btu/hr	
Heating Coil Capacity	440 kW	

The CPNPP emergency plan and security plan are described in Sections 13.3 and 13.6, respectively. These plans require testing of offsite communications links.

9.5.2.3 Safety Evaluation

CP COL 9.5(7) Add the following paragraph after the first paragraph in DCD Subsection 9.5.2.3.

Plant specific safety evaluations and procedures are established by the plant operator to prevent any unauthorized access to secure locations and or unconfirmed removal of strategic special nuclear material in accordance with 10 CFR 73.45(e)(2)(iii).

9.5.4.3 Safety Evaluation

DCD_09.05.04-28

CP COL 9.5(11) Replace the second sentence of the seventh paragraph in DCD Subsection 9.5.4.3 with the following.

Fuel oil is normally brought in by tank truck for recharging the storage tank. Additionally, if circumstances require, railroad tank cars can be brought in on the site railroad spur. The CPNPP Units 3 and 4 are located approximately 90 miles southwest of the Dallas - Ft. Worth area. Dallas - Ft. Worth is a major commercial area which has distributors of diesel fuel that represent the majority of the major oil companies. The cities, such as Houston, Beaumont etc, within 300 miles from site are capable of supplying diesel fuel oil within seven days.

9.5.9 Combined License Information

Replace the content of DCD Subsection 9.5.9 with the following.

CP COL 9.5(1) ***9.5(1)*** *Fire protection program, fire fighting procedures, and quality assurance*

This *COL item is addressed in* Subsections 9.5.1*, 9.5.1.3, 9.5.1.6,* Table 9.5.1-1R *and* Table 9.5.1-2R*.* DCD_09.05.01-6

CP COL 9.5(2) ***9.5(2)*** *Site specific fire protection aspects*

This COL item is addressed in Subsection 9.2.1.2.1, 9.5.1.2.1, 9.5.1.2.2, 9.5.1.2.3, 9.5.1.2.4, Table 9.5.1-1R, Table 9.5.1-2R, Figure 9.5.1-201, Figure 9.5.1-202 and Appendix 9A.

CP COL 9.5(3) ***9.5(3)*** *Apparatus for plant personnel and fire brigades*

This COL item is addressed in Subsection 9.5.1.6.1.8 and Table 9.5.1-2R.

CP COL 9.5(4) ***9.5(4)*** *Communication system interfaces external to the plant (offsite locations)*

This COL item is addressed in Subsection 9.5.2, 9.5.2.2.2, 9.5.2.2.2.2 and 9.5.2.2.5.1.

CP COL 9.5(5) ***9.5(5)*** *The emergency offsite communications*

This *COL item is addressed in* Subsection 9.5.2.2.2*, 9.5.2.2.2.2 and* 9.5.2.2.5.2*.*

CP COL 9.5(6) ***9.5(6)*** *Connections to the Technical Support Center*

This *COL item is addressed in* Subsection 9.5.2.2.5.2

CP COL 9.5(7) ***9.5(7)*** *Continuously manned alarm station*

This *COL item is addressed in* Subsection 9.5.2.2.5.2*. and* 9.5.2.3*.*

CP COL 9.5(8) ***9.5(8)*** *Offsite communications for the onsite operations support center.*

This *COL item is addressed in* Subsection 9.5.2.2.5.2

CP COL 9.5(9) ***9.5(9)*** *Emergency communication system*

This *COL item is addressed in* Subsection 9.5.2.2.5.2*.*

9.5(10) *Deleted from the DCD.*

CP COL 9.5(11) ***9.5(11)*** *Fuel oil recharging* DCD_09.05.04-28

This COL item is addressed in Subsection 9.5.4.3.

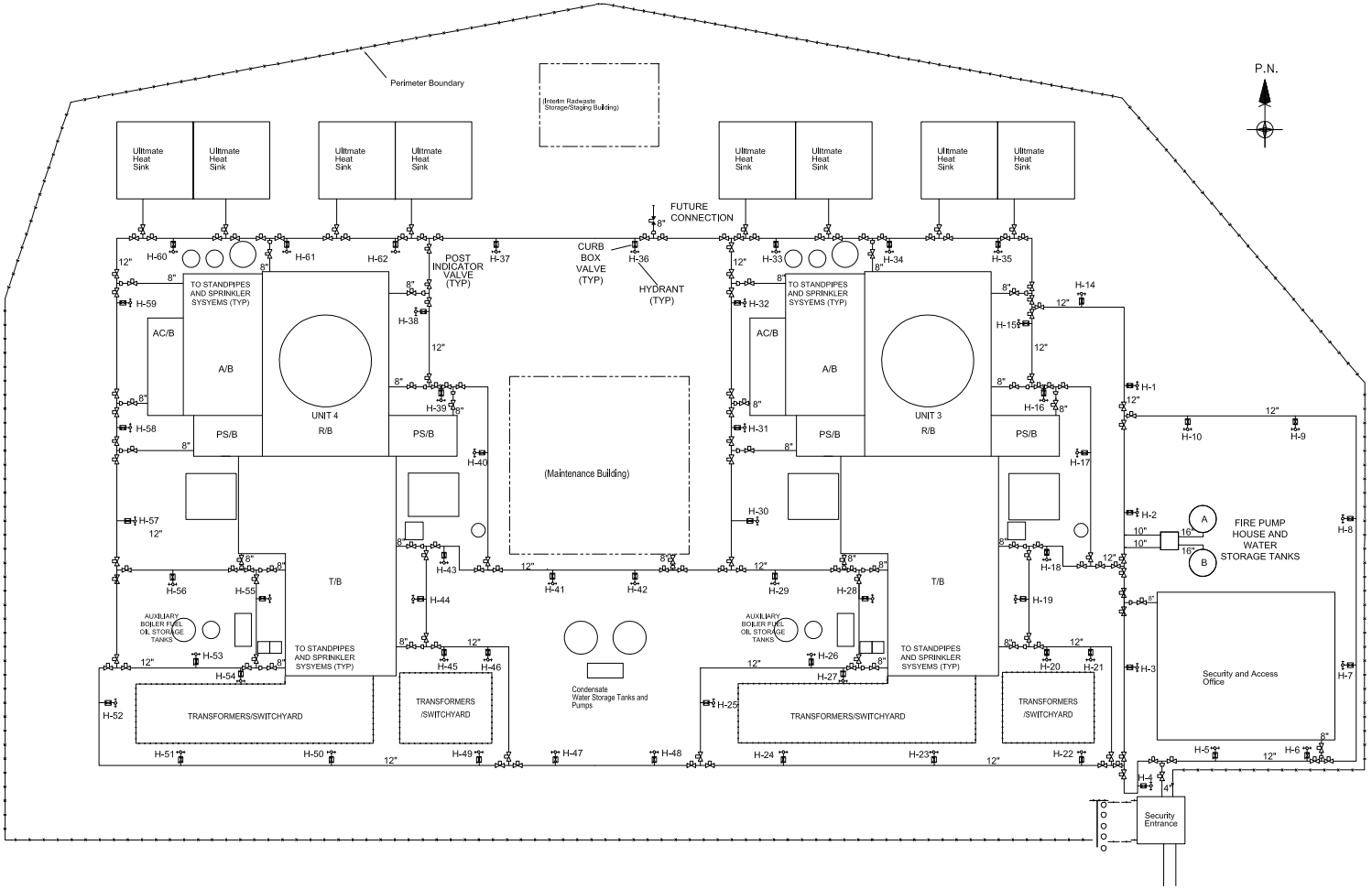
CP COL 9.5(2) **9.5.10 References**

Add the following references after the last reference in DCD Subsection 9.5.10.

9.5.1-201 NFPA 601, *Standard for Security Services in Fire Loss Prevention*, 2005 Edition, National Fire Protection Association, Quincy, MA.

9.5.1-202 NFPA 1971, *Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*, 2007 Edition, National Fire Protection Association, Quincy, MA.

CTS-00480



CP COL 9.5(2)

Figure 9.5.1-202 CPNPP Units 3 & 4 Fire Main System

Chapter 10

Chapter 10 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_10.02.03-01	10.2	10.2-1	Response to RAI No. 6 Luminant Letter no.TXNB-09023 Date 06/17/2009	For FSAR Subsection 10.2.3.5, delete the entire paragraph and replace with the following: ”A turbine maintenance and inspection procedure will be established prior to fuel load.”	-
DCD_10.03.06-6	10.3.6.3.1	10.3-1	Reflect Response to DCD RAI No.250	Replace “industry guidelines” with “NSAC-202L-R3”. Add new sentence to end of second paragraph.	3
RCOL2_10.03.06-1 RCOL2_10.03.06-2	10.3.6.3.1	10.3-1	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Replace “considers the information” with “addresses the concerns” and insert “consistent with the guidelines of” for the 2nd sentence of the 2nd paragraph. Replace the revision number for NSAC-202L from “R3” to “R2”.	-
				Replace “a limited, but thorough, baseline inspection program” with “perform preservice inspection” for the first bullet in the 3rd paragraph.	-
	10.3.6.3.1.2	10.3-2	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Insert “to identify wall thickness margins for thinning and” in the 1st sentence of the 1st paragraph.	-
				Insert “with grid location” in the 2nd sentence of the 1st paragraph.	-
				Insert a new sentence after the 2nd sentence of the 1st paragraph.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_10.03.06-1 RCOL2_10.03.06-2	10.3.6.3.1.2	10.3-2	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Delete the letter “s” in the word “inspections” and replace “are” with “after preservice inspection is” in the 3rd sentence of the 1st paragraph. Insert the word “trend” after “baseline” in the 3rd sentence of the 1st paragraph.	-
	10.3.6.3.1.4	10.3-3	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Insert a new bullet item after the 2nd bullet under “b. Implementing Procedures”.	-
				Insert “after plant operation cycles” at the end of the 4th bullet under “b. Implementing Procedures”.	-
	10.3.6.3.1.6	10.3-4	Response to RAI No. 7 Luminant Letter no.TXNB-09028 Date 8/7/2009	Insert new sentence after the 1st sentence.	-
RCOL2_10.03-1	10.3.2.3.2	10.3-1	Response to RAI No. 16 Luminant Letter no.TXNB-09033 Date 08/24/2009	Delete the entire Subsection 10.3.2.3.2 and its subsection subheading “Main Steam Safety Valves”.	-
RCOL2_10.03-1	10.3.7	10.3-4	Response to RAI No. 16 Luminant Letter no.TXNB-09033 Date 08/24/2009	Delete COL 10.3(2) description and state “Delete from DCD”.	-
RCOL2_10.04.08-2	10.4.8.2.1	10.4-6	Response to RAI No. 17 Luminant Letter no.TXNB-09034 Date 08/24/2009	Delete the entire second paragraph in FSAR Subsection 10.4.8.2.1.	-
DCD_10.03-1	10.3.2.4.3	10.3-1	Reflect Response to DCD RAI No. 329	Add new subsection.	4
DCD_10.03-1	10.3.7	10.3-4	Reflect Response	Add new COL item.	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			to DCD RAI No. 329		
DCD_10.04.07-1	10.4.7.7	10.4-5	Reflect Response to DCD RAI No. 124	Add new subsection.	4
DCD_10.04.07-1	10.4.12	10.4-9	Reflect Response to DCD RAI No. 124	Add new COL item.	4
HYDSV-16	10.4.5.3.2	10.4-5	Hydrology Site Safety Visit	Add new subsection.	4
HYDSV-16	10.4.5.6	10.4-5	Hydrology Site Safety Visit	Clarified the actuation of the makeup water pumps.	4
DCD_10.03.06-9	10.3.6.3	10.3-1	Editorial	The number of paragraph to be replaced need to be changed due to DCD change.	7
CTS-00891	10.4.12	10.4-9	Editorial	Delete "Mode".	7
DCD_10.04.09-4	10.4.9.2.2	10.4-9	Reflect Response to DCD RAI No. 160	Add the description regarding Water Hammer Prevention procedure	7
DCD_10.04.09-4	10.4.12	10.4-9	Reflect Response to DCD RAI No. 160	Add the description for Subsection 10.4.9.2.2	7
CTS-00823	Table 10.4.5-1R (Sheet 1 of 3)	10.4-10	Editorial	Changed to be consistent with DCD.	7
CTS-00824	Table 10.4.5-1R (Sheet 1 of 3)	10.4-10	Editorial correction	Changed to be consistent with DCD.	7
CTS-00892	Table 10.4.5-1R	10.4-10	Editorial	Change design outlet temperature from “104” to “103.7”	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-10-101	Figure 10.4.5-1R	10.4-16	DCD Change	Change equipment class of the system from 5 to 9.	7
MAP-10-102	Figure 10.4.5-201	10.4-17	DCD Change	Change equipment class of the system from 5 to 9.	7
MAP-10-103	Figure 10.4.8-1R	10.4-18	DCD Change	Clarify building boundary. Change equipment class. Change equipment number. Add equipment class in vent line from SGBD flash tank and in SGBD cooling water line.	7
MAP-10-104	Figure 10.4.8-2R	10.4-19	DCD Change	Clarify building boundary. Added instruments in the line from demineralized water. Change equipment name from “ION CHROMATOGRAPHY” to “BLOWDOWN SAMPLE STATION”. Change equipment class in the lines from SGBD cation/mixed bed demineralizer and the lines of SGBD demineralizers inlet filter.	7
MAP-10-105	Figure 10.4.8-201	10.4-20	DCD Change	Add equipment class.	7

10.3 MAIN STEAM SUPPLY SYSTEM

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

~~10.3.2.3.2 Main Steam Safety Valves~~

RCOL2_10.03-1

STD COL 10.3(2) ~~Replace the seventh paragraph in DCD Subsection 10.3.2.3.2 with the following.~~

~~The actual throat area for the Main Steam Safety Valves will be determined at the procurement stage.~~

10.3.2.4.3 Water (Steam) Hammer Prevention

DCD_10.03-1

STD COL 10.3(3) Replace the 6th and 7th sentence of first paragraph in DCD Subsection 10.3.2.4.3 with the following.

The operating and maintenance procedures regarding water hammer are included in system operating procedures in Subsection 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.

10.3.6.3 Flow-Accelerated Corrosion (FAC)

STD COL 10.3(1) Replace the ~~fourth~~last paragraph in DCD Subsection 10.3.6.3 with the following.

DCD_10.03.06-9

10.3.6.3.1 Flow-Accelerated Corrosion (FAC) Monitoring Program

Erosion-corrosion in piping systems is a flow-induced material degradation process. It can affect metallic materials whose corrosion resistance is based on the formation of oxide (protective) surface film. Wear-off destruction of the oxide film by turbulent flow water or steam causes corrosion of the unprotected metal.

The FAC monitoring program analyzes, inspects, monitors, and trends FAC degradation of carbon steel piping and piping components in high-energy systems that carry water or wet steam and are susceptible to erosion-corrosion damage. In addition, the FAC monitoring program ~~considers the information~~addresses the

RCOL2_10.03.06-1
RCOL2_10.03.06-2

10.4.8.5 Instrumentation Applications

CP COL 10.4(2) Add the following after the last paragraph in DCD Subsection 10.4.8.5.

High pressure and high water level in the startup SG blowdown flash tank closes the upstream flow control valve.

The startup SG blowdown heat exchanger downstream radiation monitor, located in the piping downstream of the startup SG blowdown heat exchanger, detects the presence of radioactivity in the SGBDS. Upon detection of the significant levels of radioactivity, the blowdown water is diverted to the LWMS.

A high radiation signal of the startup SG blowdown heat exchanger downstream radiation monitor closes the SGBDS isolation valves.

10.4.9.2.2 System Operation

DCD_10.04.09-4

STD COL 10.4(6) Replace the last paragraph in DCD Subsection 10.4.9.2.2 with the following.

The operating and maintenance procedures regarding water hammer are included in system operating procedures in Subsection 13.5.2.1. A milestone schedule for implementation of the procedures is also included in Subsection 13.5.2.1.

10.4.12 Combined License Information

Replace the content of the DCD Subsection 10.4.12 with the following.

CP COL 10.4(1) ***10.4(1)*** *Circulated Water System*

This COL item is addressed in Subsection10.4.5, Table 10.4.5-1R, Figure 10.4.5-1R and Figure 10.4.5-201.

CP COL 10.4(2) ***10.4(2)*** *Steam Generator Blowdown System*

This COL item is addressed in Subsection10.4.8.1, 10.4.8.2, 10.4.8.5, Table 10.4.8-1R, Figure 10.4.8-1R, Figure 10.4.8-2R and Figure 10.4.8-201.

10.4(3) *Deleted from the DCD.*

10.4(4) *Deleted from the DCD.*

CP COL 10.4(5) ***10.4(5)*** *System design for Steam Generator Drain ~~Mode~~*

CTS-00891

This COL item is addressed in Subsection10.4.8.2.2.4.

STD COL 10.4(6) ***10.4(6)*** *Operating and maintenance procedures for water hammer prevention*

This COL item is addressed in Subsection 10.4.7.7 and 10.4.9.2.2.

DCD_10.04.07-1

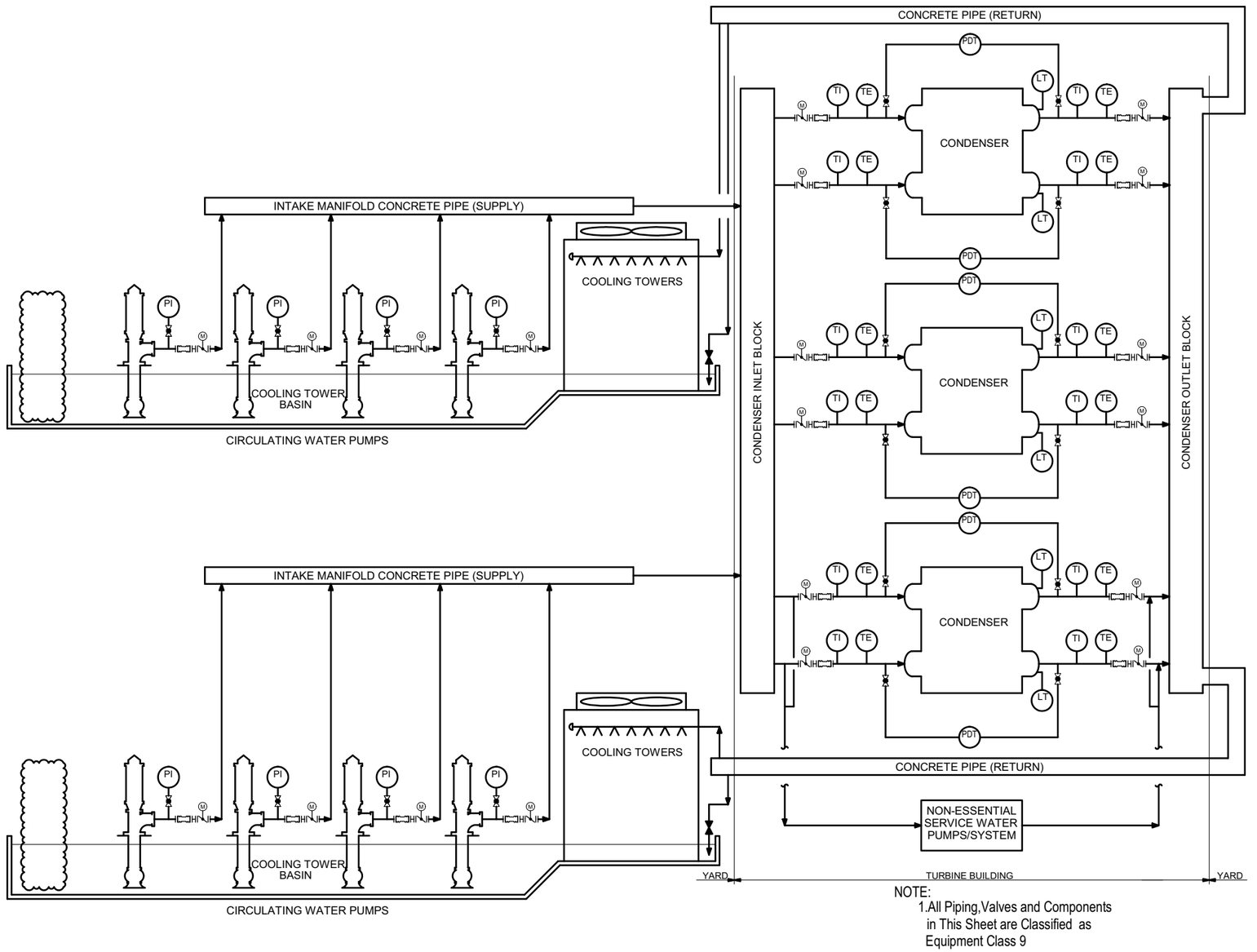
DCD_10.04.09-4

Table 10.4.5-1R (Sheet 1 of 3)

Design Parameters for Major Components of Circulating Water System

	Ambient design temperature	-	CTS-00823
	Design wet bulb temperature, (°F) (5% Exceedance)	76 (78 including 2 °F recirculation)	
	Circulating water pumps	-	
CP COL 10.4(1)	Number of pumps (per unit)	8	
	Flowrate (gpm)	164,715	
	Mechanical draft cooling towers	-	
CP COL 10.4(1)	Number of towers (per unit)	2	
	Number of cells in each cooling tower	30	
	Design inlet temperature (°F)	~~104~~103.7	CTS-00892
	Design outlet temperature (°F)	88.5	
	Design temperature rise (°F)	~~15.5~~15.2	CTS-00824
	CTW design approach temperature (°F)	10.5	
	Design flowrate (gpm)	1,290,720 plus 27,000 (for Non essential service water)	

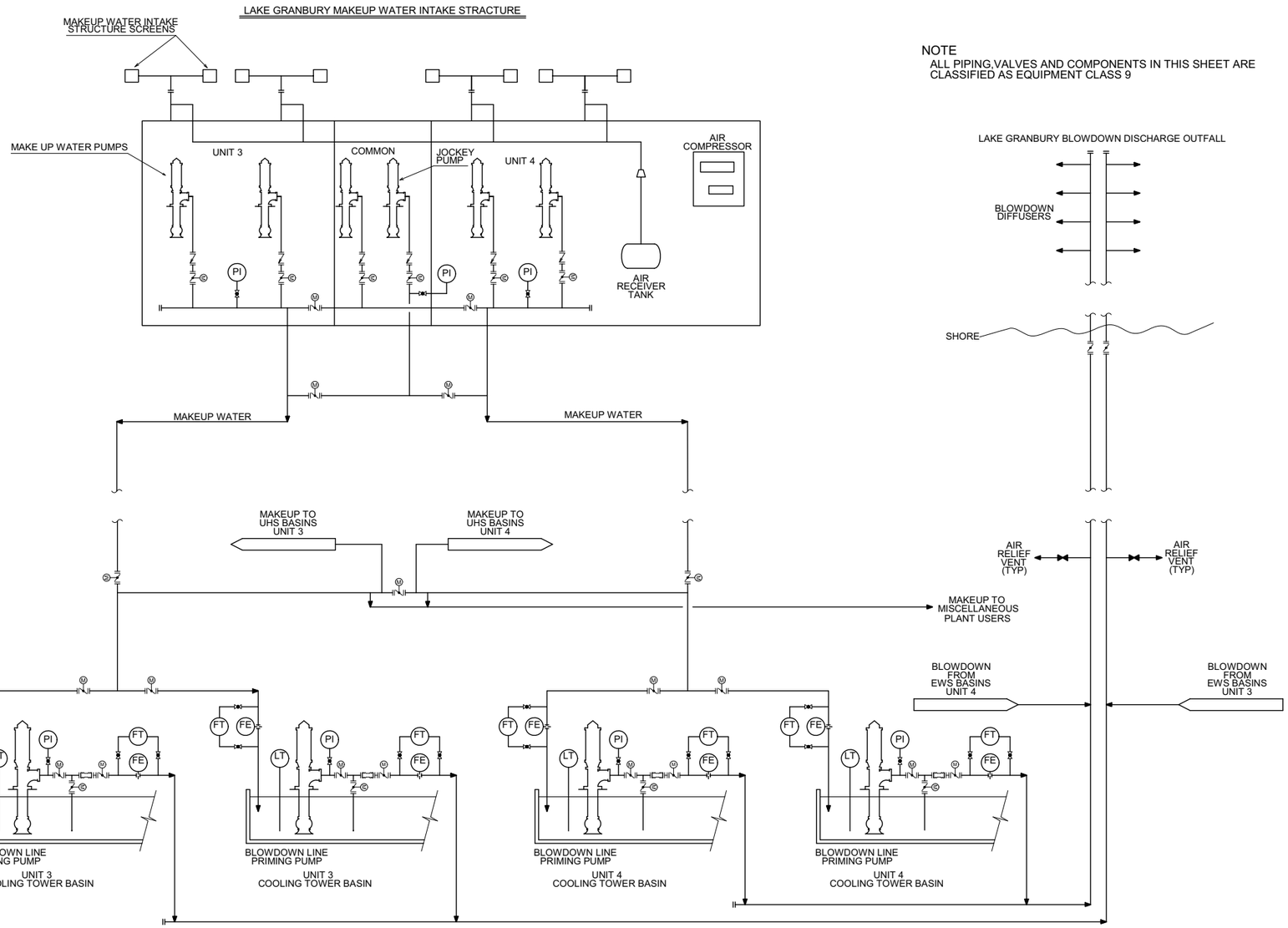
MAP-10-101



CP COL 10.4(1)

Figure 10.4.5-1R Circulating Water System Piping and Instrumentation Diagram

MAP-10-102

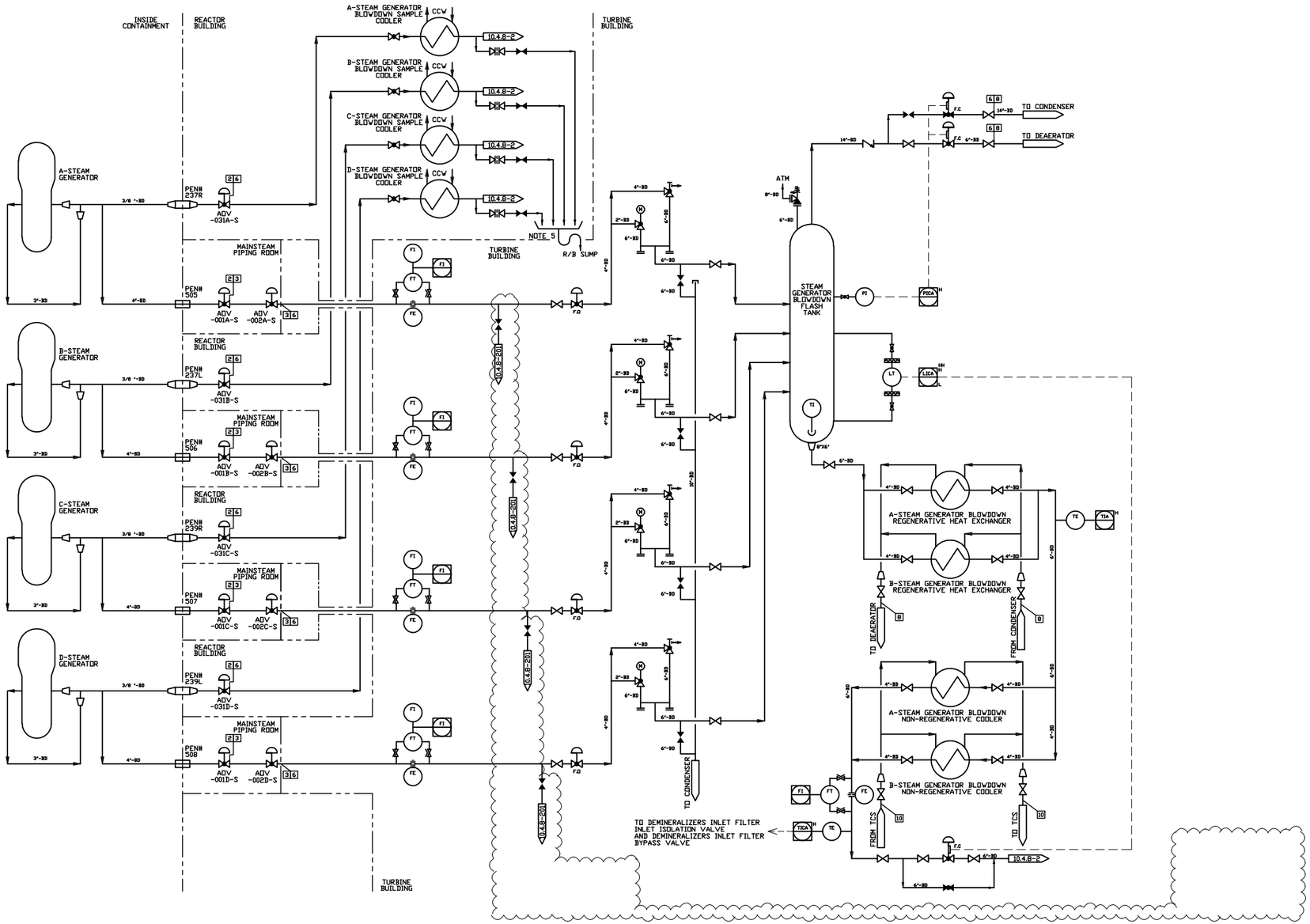


NOTE
ALL PIPING,VALVES AND COMPONENTS IN THIS SHEET ARE CLASSIFIED AS EQUIPMENT CLASS 9

CP COL 10.4(1)

Figure 10.4.5-201 Circulating Water System Piping and Instrumentation Diagram (Site-specific portion)

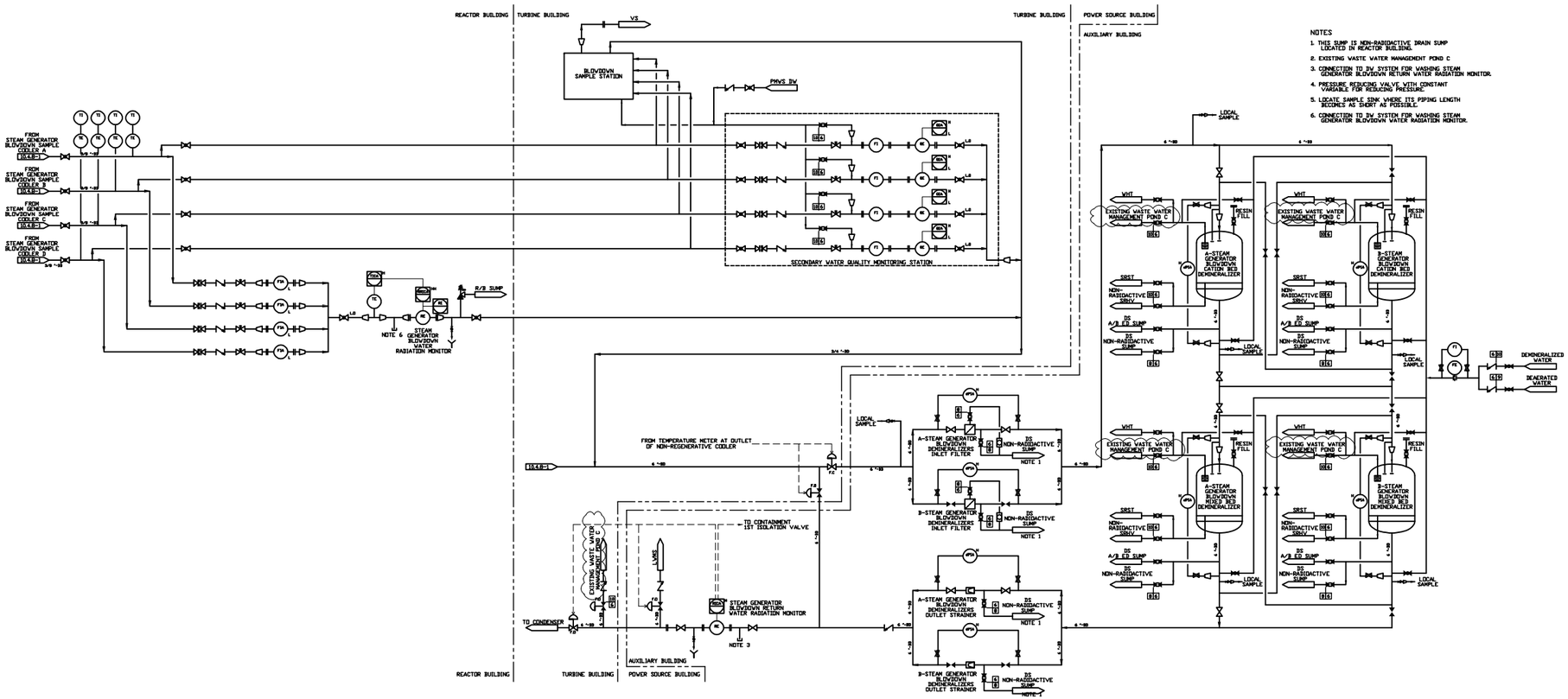
MAP-10-103



CP COL 10.4(2)

Figure 10.4.8-1R Steam Generator Blowdown System Piping and Instrumentation Diagram (Sheet 1 of 2)

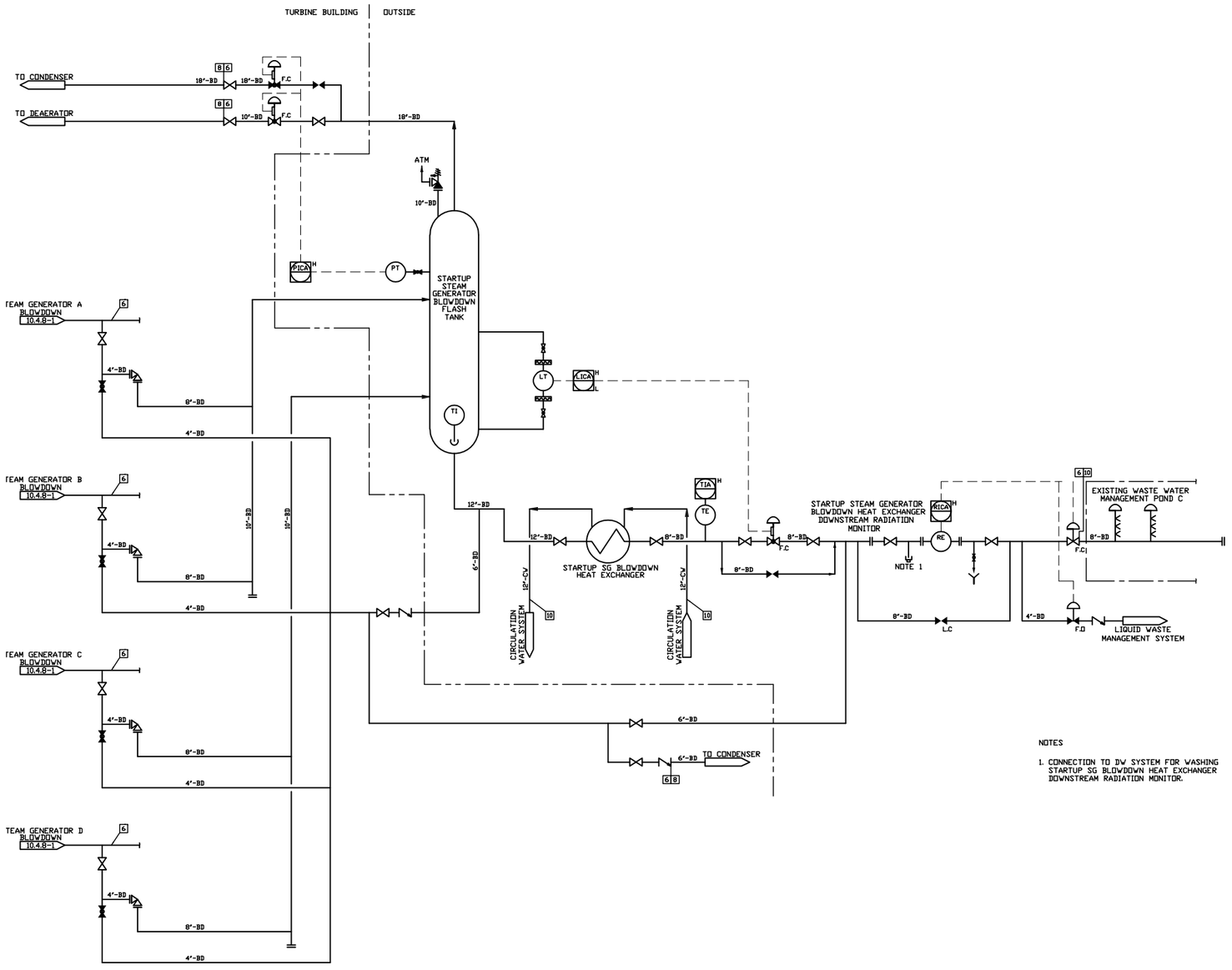
MAP-10-104



CP COL 10.4(2)

Figure 10.4.8-2R Steam Generator Blowdown System Piping and Instrumentation Diagram (Sheet 2 of 2)

MAP-10-105



CP COL 10.4(2)

Figure 10.4.8-201 Steam Generator Blowdown System Piping and Instrumentation Diagram (Site-specific portion)

Chapter 11

Chapter 11 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00482	11.2.3.1	11.2-2	Editorial correction	Delete repeated phrase.	0
CTS-00481	Table11.2-14R	11.2-14	Editorial correction	Add “hr” in transit time.	0
MAP-11-001	11.3.3.3	11.3-2, 11.3-3	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 11.3(5)	0
CTS-00728	11.2.3.1	11.2-2	Clarification	Combined the statement of the second paragraph replacement and the statement of the last four paragraphs replacement.	4
CTS-00729	11.2.3.1	11.2-2	Editorial correction	Changed “to be” to” to remain”.	4
CTS-00805	11.2.3.1	11.2-2	Editorial correction	Separated the 5th paragraph. A new paragraph starts with the following sentence. “However, during the maximum…”.	4
HPSV-02	11.2.3.1	11.2-2 11.2-3	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Provided additional description about how discharge to Squaw Creek Reservoir will occur.	4
CTS-00730	11.2.3.1	11.2-3	Clarification	Added “CPNPP Units 3 and 4” in front of “waste holdup tanks” and “liquid effluent”.	4
HPSV-02	11.2.3.1	11.2-3	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Deleted commitment to evaluate circulating water dilution prior to Units 1 and 2	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				retirement.	
HPSV-02	11.2.3.1	11.2-3	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Revised the description about the discharge line design.	4
CTS-00731	11.2.3.1	11.2-3	Editorial correction	Changed "…structure, system, and components…"to" …structures, systems, and components…"	4
CTS-00732	11.2.3.1	11.2-3	Editorial correction	Changed "…the local area rainfall and evaporation rate and half of liquid effluent." to" …the local area rainfall, evaporation rate, and receiving half of the CPNPP Units 3 and 4 liquid effluent."	4
CTS-00733	11.2.3.1	11.2-3	Editorial correction	Combined following sentences to one sentence to delete duplicate description. "The pond design includes a discharge line and transfer pump. A discharge line connects into CPNPP Units 1 and 2 circulating water return line to keep the pond from overflowing during periods of extreme weather conditions."	4
HPSV-02	11.2.3.4	11.2-4	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Added a new subsection to provide the evaporation pond design criteria and operating information.	4
HPSV-02	11.3.3.1	11.3-2	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Added note that noble gases are not present in evaporation pond.	4
HPSV-02	Figure	11.2-25	NRC information	Revised the figure to	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
	11.2-201(Sheet 9 of 9)		need at HP Safety Site Visit (June 23 and 24,2009)	use dotted line for existing Unit 1 and 2 piping and a solid line for the evaporation pond.	
HPSV-04	11.3.3.1	11.3-2	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Corrected the discrepancy on total dose to skin and total body between the text and Table 11.3-9R.	4
HPSV-04	11.3.3.1	11.3-2	NRC information need at HP Safety Site Visit (June 23 and24,2009)	Identified maximum dose from the pond and the pond + the vent stack in text. Identified the h group organ pathway also.	4
HPSV-09	11.4.2.3	11.4-2	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Provided the additional description about the new low-level radwaste storage facility.	4
HPSV-10	11.5.2.9	11.5-2	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Revised to reflect that the ODCM will be re-written to apply to all four CPNPP units and to conform with the NEI.	4
CTS-00783	11.5.2.9	11.5-2	DCWG Meeting (July 16, 2009)	Deleted a following sentence. "CPNPP has already had an existing ODCM (Reference11.5-201) that is to reflect the new reactor units."	5
CTS-00806	11.4.4.5	11.4-4	DCWG Meeting (July 16, 2009)	Added descriptions about mobile system connections and a commitment about the operational procedure.	5
CTS-00766	11.5.2.6	11.5-1	DCWG Meeting (July 16, 2009)	Add a following phrase between "These procedures" and "are prepared". ", described in Subsection 13.5.2,"	5
CTS-00765	11.5.2.10	11.5-2	DCWG Meeting (July 16, 2009)	Deleted the following sentence.	5

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				"CPNPP currently has a radiological environmental monitoring program for CPNPP Units 1 and 2 that is described in the plant Technical Specifications and the existing ODCM." Added the following sentence. "The radiological environmental monitoring program for CPNPP Units 3 and 4 follows the guidance of NEI 07-09."	
CTS-00839	11.2.1.6	11.2-1	Editorial correction	Changed "Process piping connections are designed to have" to "Process piping connections have".	-
RCOL2_11.02-1	11.2.1.6	11.2-1	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Added the description about mobile or temporary equipment.	-
RCOL2_11.02-2	11.2.2	11.2-2	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Changed total sheet number of Figure 11.2-201.	-
RCOL2_11.02-2	11.2.2	11.2-2	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Changed the description about the configuration of the discharge line from the CPNPP Units 3 and 4 and the evaporation pond.	-
RCOL2_11.02-4	11.2.2	11.2-2 11.2-3	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Added the description about the bypass valve VLV-531.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_11.02-2	11.2.3.1	11.2-4	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Changed the description about the configuration of the discharge line from the CPNPP Units 3 and 4 and the evaporation pond.	-
RCOL2_11.02-3	11.2.3.1	11.2-5	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Added the description about the evaporation pond design feature.	-
RCOL2_11.02-3	11.2.3.1	11.2-6	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Added the description about how the effluent from evaporation pond meet the regularly requirements.	-
RCOL2_11.02-2	Figure 11.2-201 (Sheet 1-10 of 10)	11.2-22 to 11.2-31	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Changed total sheet number of Figure 11.2-201.	-
RCOL2_11.02-3	Figure 11.2-201 (Sheet 9 of 10)	11.2-30	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Changed the Figure 11.2-201 (Sheet 9)	-
RCOL2_11.02-2	Figure 11.2-201 (Sheet 10 of 10)	11.2-31	Response to RAI No. 29 Luminant Letter no.TXNB-09048 Date 9/24/2009	Added Figure 11.2-201 (Sheet 10)	-
MAP-11-101	Table 11.2-10R (Sheet 1 of 2)	11.2-6	DCD change due to correction of secondary coolant Y-93 activity errata described in ANSI/ANS-18.1-1999.	Changed value of Y-93	7
MAP-11-102	Table 11.2-12R (Sheet 1 of 2)	11.2-10	DCD change due to correction of secondary coolant Y-93 activity errata described in ANSI/ANS-18.1-1999.	Changed value of Y-93	7
MAP-11-103	Table 11.3-202	11.3-9	DCD change due to correction of	Changed value of Y-93	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			secondary coolant Y-93 activity errata described in ANSI/ANS-18.1-1999.		
MAP-11-104	11.4.3.2 11.5.2.9 11.5.2.10	11.4-3 and 11.5-2	Due to the revision up of NEI	Revised the revision of NEI	7
MAP-11-105	Figure 11.2-201 (Sheet 1-8 of 10)	11.2-22 to 11.2-29	DCD change due to US-APWR design revision	Update figures to reflect the changes of standard design. The changes include additional sump tanks, elimination of reactor cavity drain line and permanent cavity seal drain line, reflection of piping arrangement information, adding local drain/vent valves.	7
MAP-11-106	Figure 11.3-201 (Sheet 1-3 of 3)	11.3-13 to 11.3-15	DCD change due to US-APWR design revision	Update figures to reflect the changes of standard design. The changes include reflection of piping arrangement information, adding local drain/vent valves and traps.	7
MAP-11-107	Figure 11.4-201	11.4-6	DCD change due to US-APWR design revision	Update figures to reflect the changes of standard design. The changes include reflection of piping arrangement information.	7

CP COL 11.2(4)

Table 11.2-10R (Sheet 1 of 2)
Liquid Releases Calculated by PWR GALE Code (Ci/yr)

Isotope	Shim Bleed	Misc. Wastes	Turbine Building	Combined Releases	Detergent Waste(3)	TOTAL Releases (1)
Corrosion and Activation Products						
Na-24	0.00000	0.00029	0.00002	0.00031	N/A	4.70E-03
P-32	0.00000	0.00000	0.00000	0.00000	N/A	0.00E+00
Cr-51	0.00000	0.00008	0.00000	0.00008	N/A	1.30E-03
Mn-54	0.00000	0.00004	0.00000	0.00005	N/A	7.00E-04
Fe-55	0.00000	0.00003	0.00000	0.00003	N/A	5.00E-04
Fe-59	0.00000	0.00001	0.00000	0.00001	N/A	1.00E-04
Co-58	0.00000	0.00012	0.00000	0.00013	N/A	1.90E-03
Co-60	0.00000	0.00001	0.00000	0.00002	N/A	0.00E+00
Ni-63	0.00000	0.00000	0.00000	0.00000	N/A	0.00E+00
Zn-65	0.00000	0.00001	0.00000	0.00001	N/A	2.20E-04
W-187	0.00000	0.00002	0.00000	0.00002	N/A	3.50E-04
Np-239	0.00000	0.00003	0.00000	0.00004	N/A	5.30E-04
Fission Products						
Rb-88	0.00000	0.00187	0.00000	0.00187	N/A	2.80E-02
Sr-89	0.00000	0.00000	0.00000	0.00000	N/A	6.00E-05
Sr-90	0.00000	0.00000	0.00000	0.00000	N/A	8.00E-06
Sr-91	0.00000	0.00000	0.00000	0.00000	N/A	6.80E-05
Y-91m	0.00000	0.00000	0.00000	0.00000	N/A	4.40E-05
Y-91	0.00000	0.00000	0.00000	0.00000	N/A	1.00E-05
Y-93	0.00000	0.00002	0.00000	0.00002	N/A	~~2.90E-04~~3.10 E-04
Zr-95	0.00000	0.00001	0.00000	0.00001	N/A	2.00E-04
Nb-95	0.00000	0.00001	0.00000	0.00001	N/A	1.00E-04
Mo-99	0.00000	0.00011	0.00000	0.00011	N/A	1.64E-03
Tc-99m	0.00000	0.00011	0.00000	0.00011	N/A	1.70E-03
Ru-103	0.00001	0.00020	0.00000	0.00021	N/A	3.11E-03
Rh-103m	0.00001	0.00020	0.00000	0.00021	N/A	3.10E-03
Ru-106	0.00010	0.00243	0.00005	0.00257	N/A	3.81E-02
Rh-106	0.00010	0.00243	0.00005	0.00257	N/A	3.90E-05
Ag-110m	0.00000	0.00003	0.00000	0.00004	N/A	6.00E-04
Ag-110	0.00000	0.00000	0.00000	0.00000	N/A	7.20E-05
Sb-124	0.00000	0.00000	0.00000	0.00000	N/A	0.00E+00
Te-129m	0.00000	0.00000	0.00000	0.00001	N/A	7.80E-05
Te-129	0.00000	0.00002	0.00000	0.00002	N/A	3.10E-04
Te-131m	0.00000	0.00002	0.00000	0.00002	N/A	2.50E-04
Te-131	0.00000	0.00000	0.00000	0.00001	N/A	7.60E-05
I-131	0.00002	0.00001	0.00000	0.00002	N/A	4.00E-04
Te-132	0.00000	0.00003	0.00000	0.00003	N/A	4.70E-04
I-132	0.00000	0.00001	0.00001	0.00002	N/A	3.10E-04
I-133	0.00001	0.00002	0.00003	0.00005	N/A	8.10E-04
I-134	0.00000	0.00001	0.00000	0.00001	N/A	8.90E-05
Cs-134	0.00002	0.00005	0.00000	0.00007	N/A	1.00E-03
I-135	0.00000	0.00002	0.00003	0.00005	N/A	7.80E-04
Cs-136	0.00030	0.00112	0.00000	0.00141	N/A	2.16E-02
Cs-137	0.00003	0.00008	0.00000	0.00011	N/A	2.00E-03

MAP-11-101

Notes:
1. The release totals include an adjustment of 0.16 Ci/yr added by the PWR-GALE Code to account for AOOs.
2. An entry of 0.00000 indicates that the value is less than 1.0E-5 Ci/yr.

CP COL 11.2(4)

Table 11.2-12R (Sheet 1 of 2)

Comparison of Annual Average Liquid Release Concentrations with 10 CFR 20 (Expected Releases)

Isotope (1)	Discharge Concentration (µCi/ml) (2)	Effluent Concentration Limit (µCi/ml) (3)	Fraction of Concentration Limit
Na-24	1.19E-11	5.00E-05	2.39E-07
P-32	0.00E+00	9.00E-06	0.00E+00
Cr-51	3.30E-12	5.00E-04	6.60E-09
Mn-54	1.78E-12	3.00E-05	5.92E-08
Fe-55	1.27E-12	1.00E-04	1.27E-08
Fe-59	2.54E-13	1.00E-05	2.54E-08
Co-58	4.82E-12	2.00E-05	2.41E-07
Co-60	0.00E+00	3.00E-06	0.00E+00
Ni-63	0.00E+00	1.00E-04	0.00E+00
Zn-65	5.58E-13	5.00E-06	1.12E-07
W-187	8.88E-13	3.00E-05	2.96E-08
Np-239	1.35E-12	2.00E-05	6.73E-08
Rb-88	7.11E-11	4.00E-04	1.78E-07
Sr-89	1.52E-13	8.00E-06	1.90E-08
Sr-90	2.03E-14	5.00E-07	4.06E-08
Sr-91	1.73E-13	2.00E-05	8.63E-09
Y-91m	1.12E-13	2.00E-03	5.58E-11
Y-91	2.54E-14	8.00E-06	3.17E-09
Y-93	~~7.36E-13~~7.87E-13	2.00E-05	~~3.68E-08~~3.93E-08
Zr-95	5.08E-13	2.00E-05	2.54E-08
Nb-95	2.54E-13	3.00E-05	8.46E-09
Mo-99	4.16E-12	2.00E-05	2.08E-07
Tc-99m	4.32E-12	1.00E-03	4.32E-09
Ru-103	7.89E-12	3.00E-05	2.63E-07
Rh-103m	7.87E-12	6.00E-03	1.31E-09
Ru-106	9.67E-11	3.00E-06	3.22E-05
Ag-110m	1.52E-12	6.00E-06	2.54E-07
Sb-124	0.00E+00	7.00E-06	0.00E+00
Te-129m	1.98E-13	7.00E-06	2.83E-08
Te-129	7.87E-13	4.00E-04	1.97E-09
Te-131m	6.35E-13	8.00E-06	7.93E-08
Te-131	1.93E-13	8.00E-05	2.41E-09
I-131	1.02E-12	1.00E-06	1.02E-06
Te-132	1.19E-12	9.00E-06	1.33E-07
I-132	7.87E-13	1.00E-04	7.87E-09
I-133	2.06E-12	7.00E-06	2.94E-07

MAP-11-102

Notes:

1. Rh-106, Ag-110, Ba-137m are not included in Table 2 of 10 CFR 20 Appendix B. Therefore, these nuclides are excluded from the calculation of the discharge concentration.
2. Annual average discharge concentration based on release of average daily discharge for 292 days per year with 247,500 gpm dilution flow.
3. 10 CFR 20 Appendix B, Table 2

CP COL 11.3(6)

Table 11.3-202

Release Rates from the Evaporation Pond to Atmosphere

Isotope	Release Rate(1) (Ci/yr)	Isotope	Release Rate(1) (Ci/yr)
Na-24	2.35E-03	Rh-106	1.95E-02
P-32	0.00E+00	Ag-110M	3.00E-04
Cr-51	6.50E-03	Ag-110	3.60E-05
Mn-54	3.50E-04	Sb-124	0.00E+00
Fe-55	2.50E-04	Te-129M	3.90E-05
Fe-59	5.00E-05	Te-129	1.55E-04
Co-58	9.50E-04	Te-131M	1.25E-04
Co-60	0.00E+00	Te-131	3.80E-05
Ni-63	0.00E+00	I-131	2.00E-04
Zn-65	1.10E-04	Te-132	2.35E-04
W-87	1.75E-04	I-132	1.55E-04
Np-239	2.65E-04	I-133	4.05E-04
Rb-88	1.40E-02	I-134	4.45E-05
Sr-89	3.00E-05	Cs-134	5.00E-04
Sr-90	4.00E-06	I-135	3.90E-04
Sr-91	3.40E-05	Cs-136	1.08E-02
Y-91M	2.20E-05	Cs-137	1.00E-03
Y-91	5.00E-06	Ba-137M	2.30E-04
Y-93	~~1.45E-04~~1.55E-04	Ba-140	2.45E-03
Zr-95	1.00E-04	La-140	4.00E-03
Nb-95	5.00E-05	Ce-141	3.00E-05
Mo-99	8.20E-04	Ce-143	2.50E-04
Tc-99M	8.50E-04	Pr-143	3.95E-05
Ru-103	1.56E-03	Ce-144	8.50E-04
Rh-103M	1.55E-03	Pr-144	8.50E-04
Ru-106	1.91E-02	H-3	8.00E+02

MAP-11-103

Note:

1. The release rates are half of the total liquid release rates that be shown in Table 11.2-10R.

11.4.3.2 Process Control Program

CP COL 11.4(3) Replace the content of DCD Subsection 11.4.3.2 with the following.

This subsection adopts NEI 07-10A~~, which is currently under review by the NRC staff~~. The Process Control Program (PCP) describes the administrative and operational controls used for the solidification of liquid or wet solid waste and the dewatering of wet solid waste. The purpose of the PCP is to provide the necessary controls such that the final disposal waste product meets applicable federal regulations (10 CFR Parts 20, 50, 61, 71, and 49 CFR Part 173), state regulations, and disposal site waste form requirements for burial at a low level waste disposal site that is licensed in accordance with 10 CFR Part 61. Waste processing (solidification and/or dewatering) equipment and services may be provided by third-party vendors. The process used in the existing design meets the applicable requirements of the PCP. Table 13.4-201 provides the milestone for PCP implementation. MAP-11-104

Additional onsite radioactive solid waste storage is provided and is discussed in Subsection 11.4.2.3.

11.4.4.5 Mobile De-watering System

CP COL 11.4(4) Replace the last sentence in DCD Subsection 11.4.4.5 with the following.

CP COL 11.4(7)

The mobile de-watering station is vendor supplied and operated within the specific requirements and layout based on vendor specifications. The mobile system includes the necessary connections and fittings to the interface with the plant piping. The connectors are uniquely designed to prevent inadvertent cross connection between the radioactive and non-radioactive plant piping. The piping also includes backflow inhibitors. ~~Operating procedures will be developed and implemented with PCP so that the guidance and information in IE Bulletin 80-10 (Reference 11.4-29) is followed. The milestone for procedure implementation is listed in Table 13.4-201.~~Liquid effluent from the mobile de-watering station is routed to the Liquid Waste Management System and the non-condensables are vented to the A/B ventilation system. An operating procedure will be provided prior to fuel load to ensure proper operation of the mobile de-watering station to prevent the contamination of non-radioactive piping or uncontrolled releases of radioactivity into the environment. CTS-00806

CP COL 11.5(4)
CP COL 11.5(5)

Replace the last sentence in DCD Subsection 11.5.2.8 with the following.

Site-specific procedures on equipment inspection, calibration, maintenance, and regulated record keeping, which meet the requirements of 10 CFR 20.1301, 10 CFR 20.1302, and 10 CFR 50 Appendix I, are prepared and implemented under the quality assurance program referenced in Chapter 17.

11.5.2.9 Offsite Dose Calculation Manual

Replace the first sentence in DCD Subection 11.5.2.9 with the following.

CP COL 11.5(2)
CP COL 11.5(1)

Fulfillment of the 10 CFR 50 Appendix I guidelines requires effluent monitor data. A description of the monitor controls and the calculation of the monitor setpoints are part of the ODCM. The ODCM also provides the rationale for compliance with the radiological effluent Technical Specifications and for the calculation of appropriate setpoints for effluent monitors. The ODCM follows the guidance of NEI 07-09A. The ODCM and radiological effluent Technical Specifications, which reflect the new reactor units, are implemented in accordance with the milestone listed in Table 13.4-201. ~~CPNPP has already had an existing ODCM (Reference 11.5-201) that is to reflect the new reactor units.~~ The ODCM will be re-written to apply to all four CPNPP units and to conform with the NEI template before receipt of radioactive material in Unit 3 in accordance with FSAR Table 13.4-201. MAP-11-104 CTS-00783 HPSV-10

11.5.2.10 Radiological Environmental Monitoring Program

CP COL 11.5(3)

Replace the content of DCD Subsection 11.5.2.10 with the following.

~~CPNPP currently has a radiological environmental monitoring program for CPNPP Units 1 and 2 that is described in the plant Technical Specifications and the existing ODCM.~~ The program for CPNPP Units 3 and 4 is going to be described in the plant Technical Specification of CPNPP Units 3 and 4 and the ODCM, which reflect the new reactor units, is implemented in accordance with the milestone listed in Table 13.4-201. This program measures direct radiation using thermoluminescent dosimeters as well as analyses of samples of the air, water, vegetation, and fauna in the surrounding area. The guidance outlined in NUREG-1301 (Reference 11.5-21) and NUREG-0133 (Reference 11.5-18) is to be used when developing the radiological environmental monitoring program. The CTS-00765 CTS-00765

radiological environmental monitoring program for CPNPP Units 3 and 4 follows the guidance of NEI 07-09A. CTS-00765 MAP-11-104

11.5.2.11 Site-Specific Cost-Benefit Analysis

CP COL 11.5(6) Replace the content of DCD Subsection 11.5.2.11 with the following.

The results of site-specific cost-benefit analysis are described in Subsections 11.2.1.5 and 11.3.1.5.

11.5.5 Combined License Information

Replace the content of DCD Subsection 11.5.5 with the following.

CP COL 11.5(1) ***11.5(1)*** *Site-specific aspects*

This COL item is addressed in Subsection 11.5.2.9.

CP COL 11.5(2) ***11.5(2)*** *Offsite dose calculation manual*

This COL item is addressed in Subsection 11.5.2.7 and 11.5.2.9.

CP COL 11.5(3) ***11.5(3)*** *Radiological and environmental monitoring program*

This COL item is addressed in Subsection 11.5.2.10.

CP COL 11.5(4) ***11.5(4)*** *Inspection, decontamination, and replacement*

This COL item is addressed in Subsections 11.5.2.6 and 11.5.2.8.

CP COL 11.5(5) ***11.5(5)*** *Analytical procedures*

This COL item is addressed in Subsections 11.5.2.6 and 11.5.2.8.

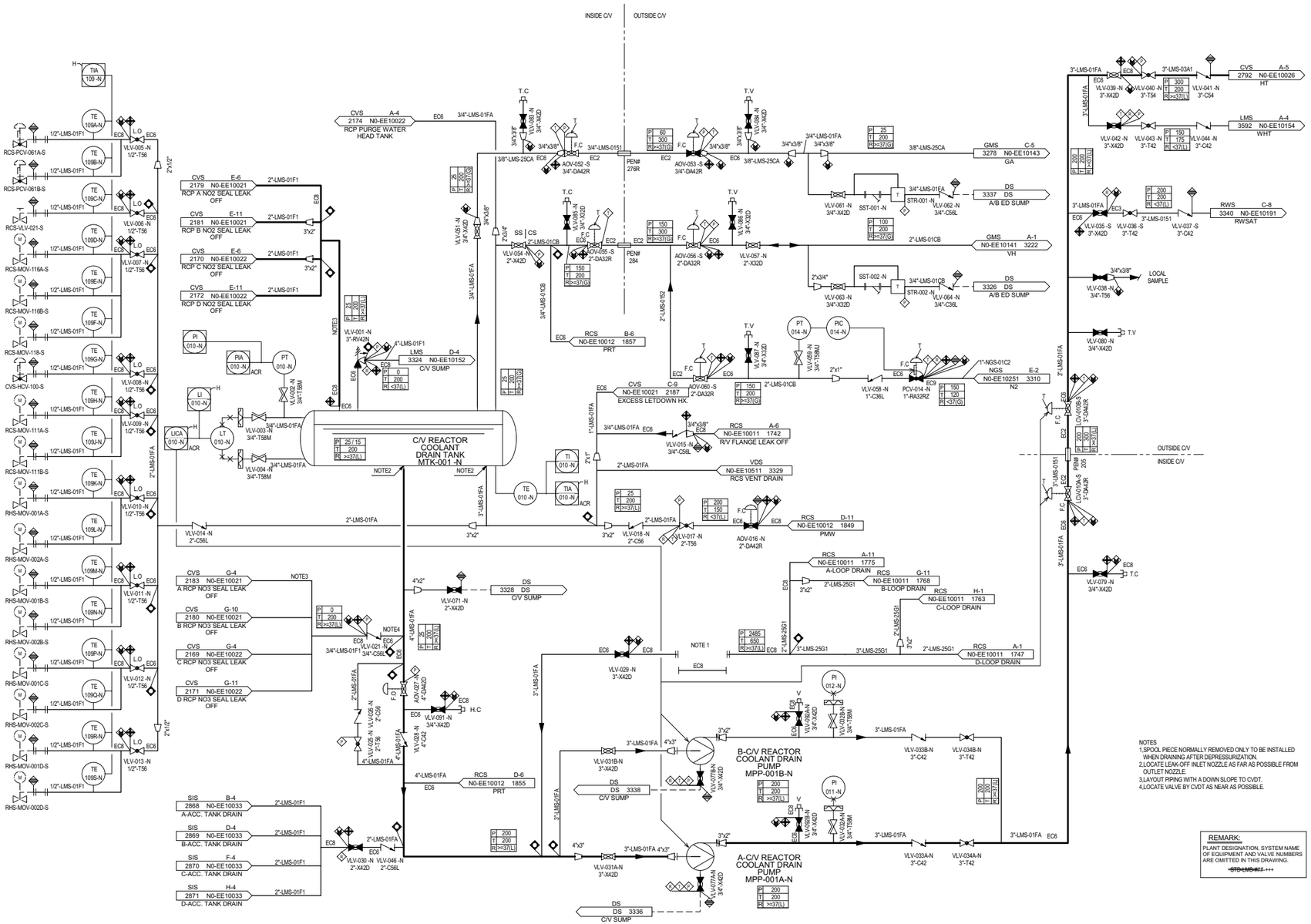
CP COL 11.5(6) ***11.5(6)*** *The site-specific cost benefit analysis*

This COL item is addressed in Subsection 11.5.2.11.

11.5.6 References

Add the following reference after the last reference in DCD Subsection 11.5.6.

MAP-11-105

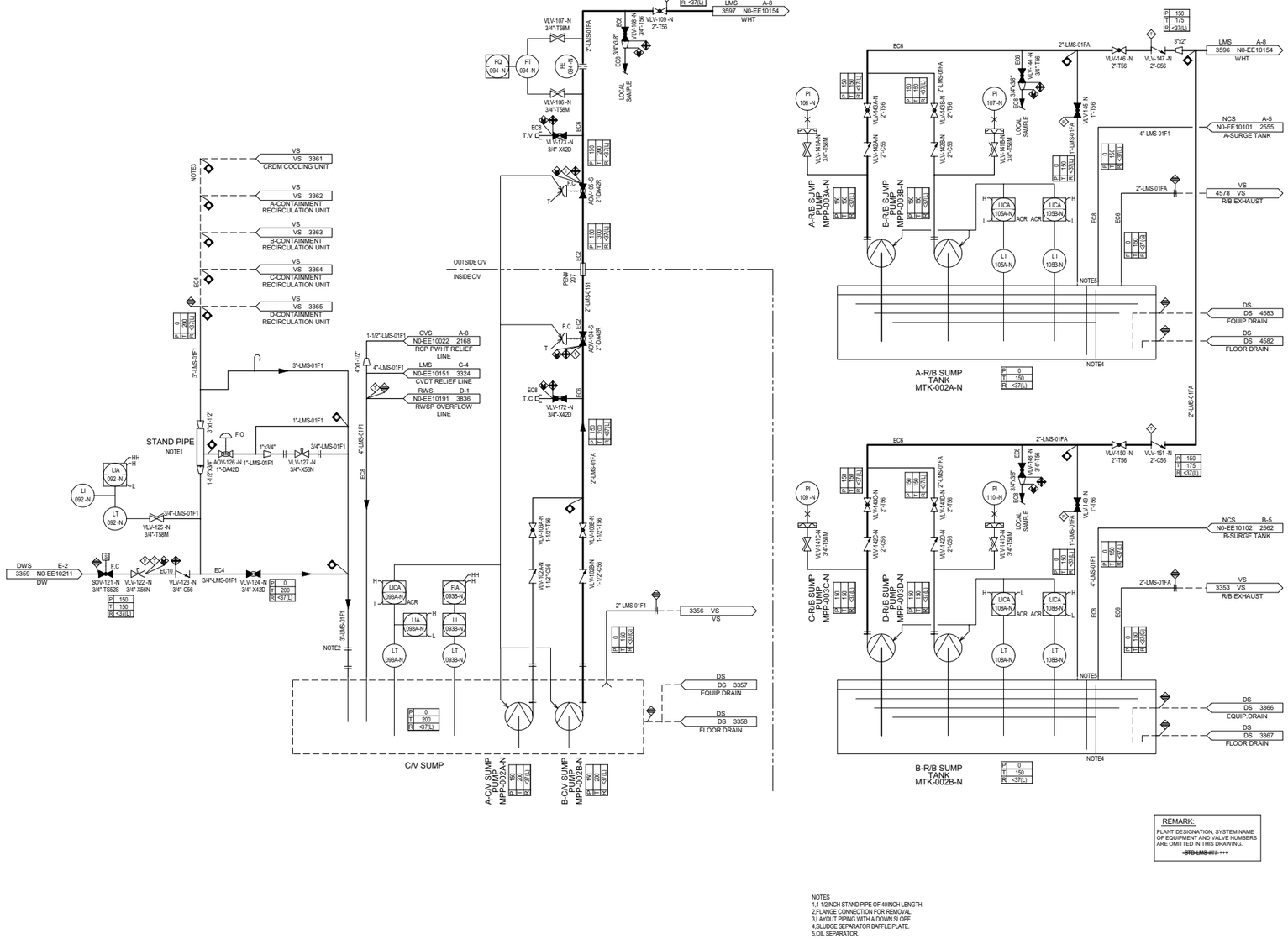


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 1 of ~~9~~10)

RCOL2_11.02-2

MAP-11-105

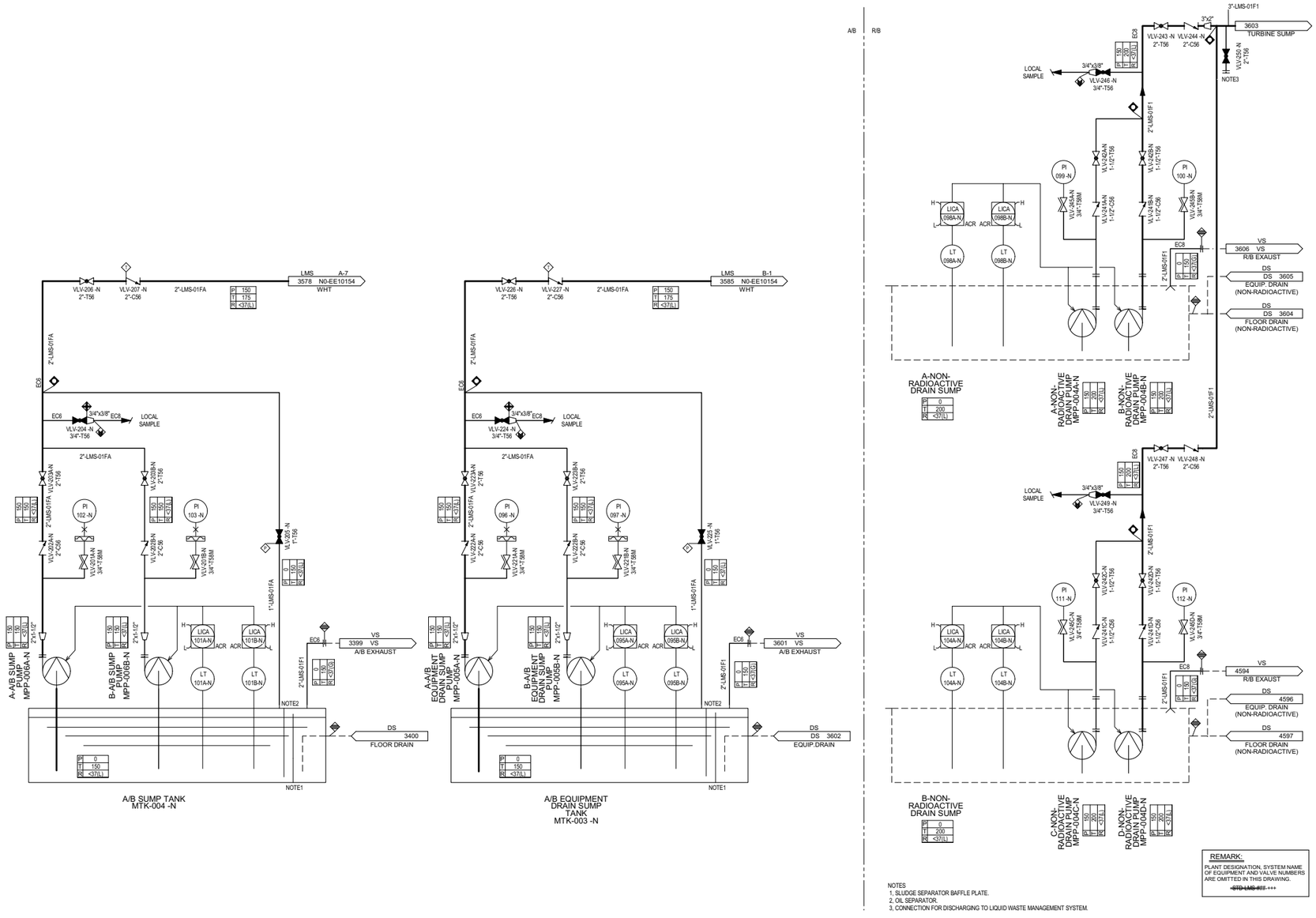


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 2 of ~~9~~10)

RCOL2_11.02-2

MAP-11-105

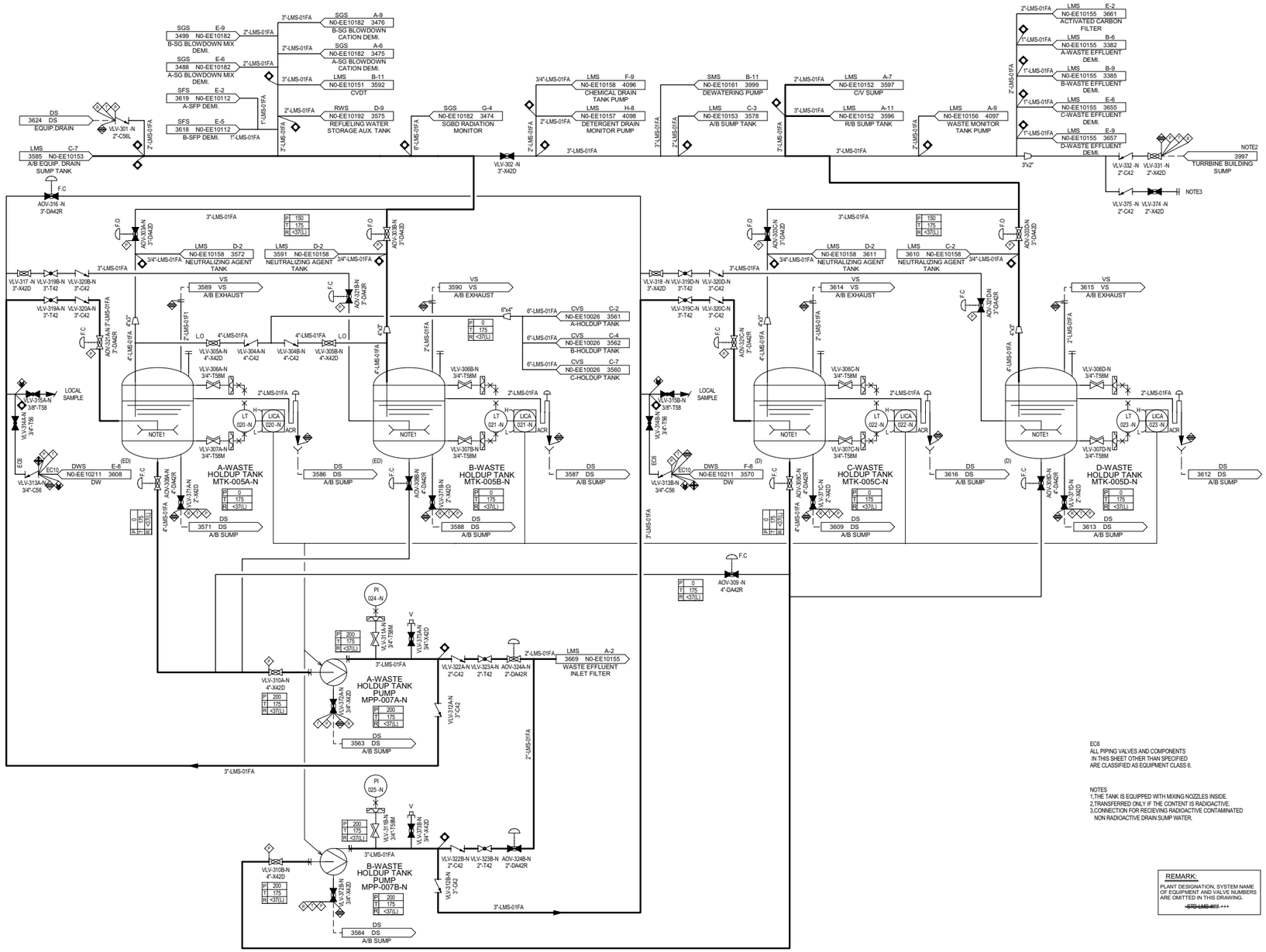


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 3 of ~~9~~10)

RCOL2_11.0 2-2

MAP-11-105

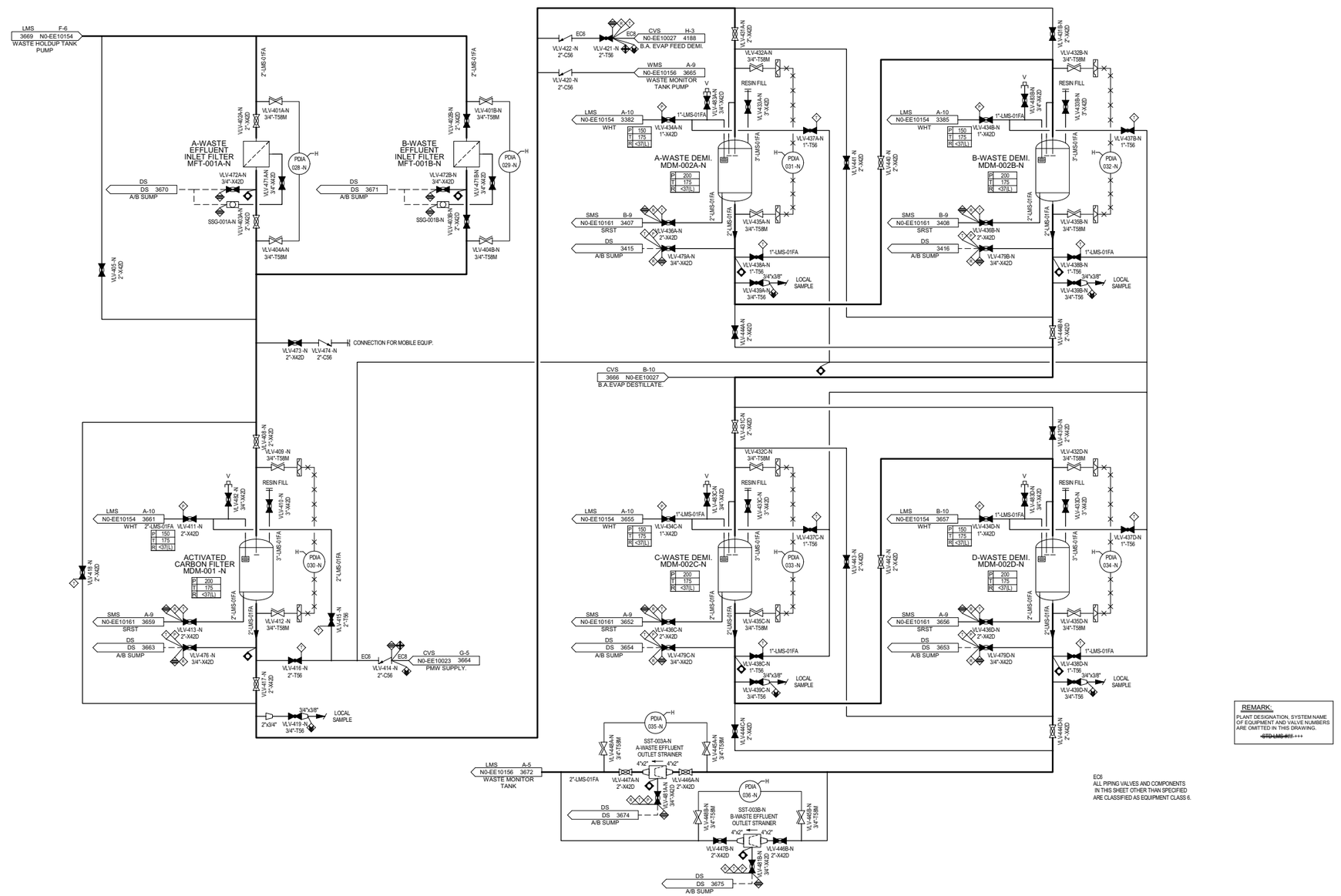


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 4 of ~~9~~10)

RCOL2_11.02-2

MAP-11-105



CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 5 of ~~9~~10)

RCOL2_11.02-2

MAP-11-105

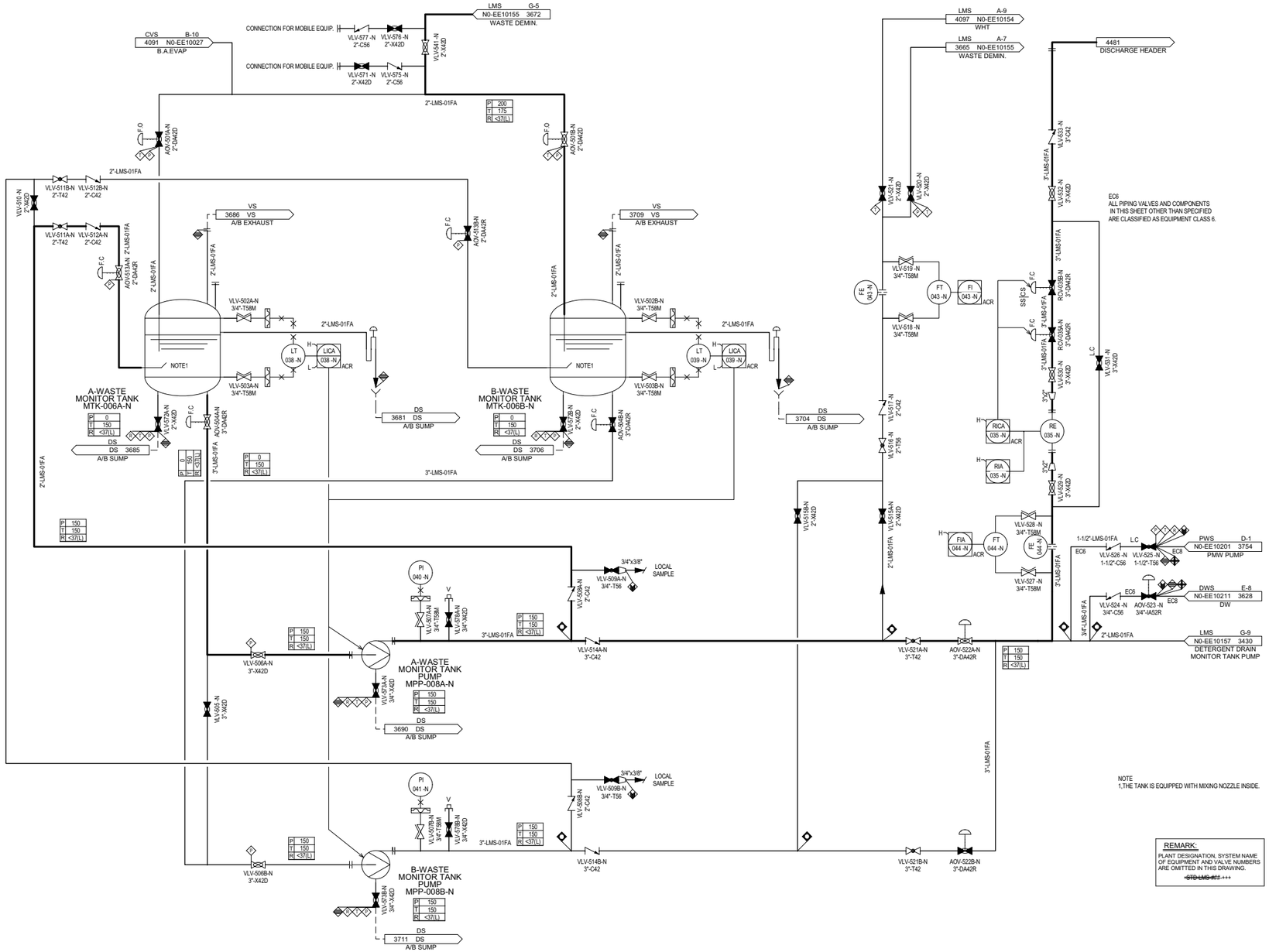
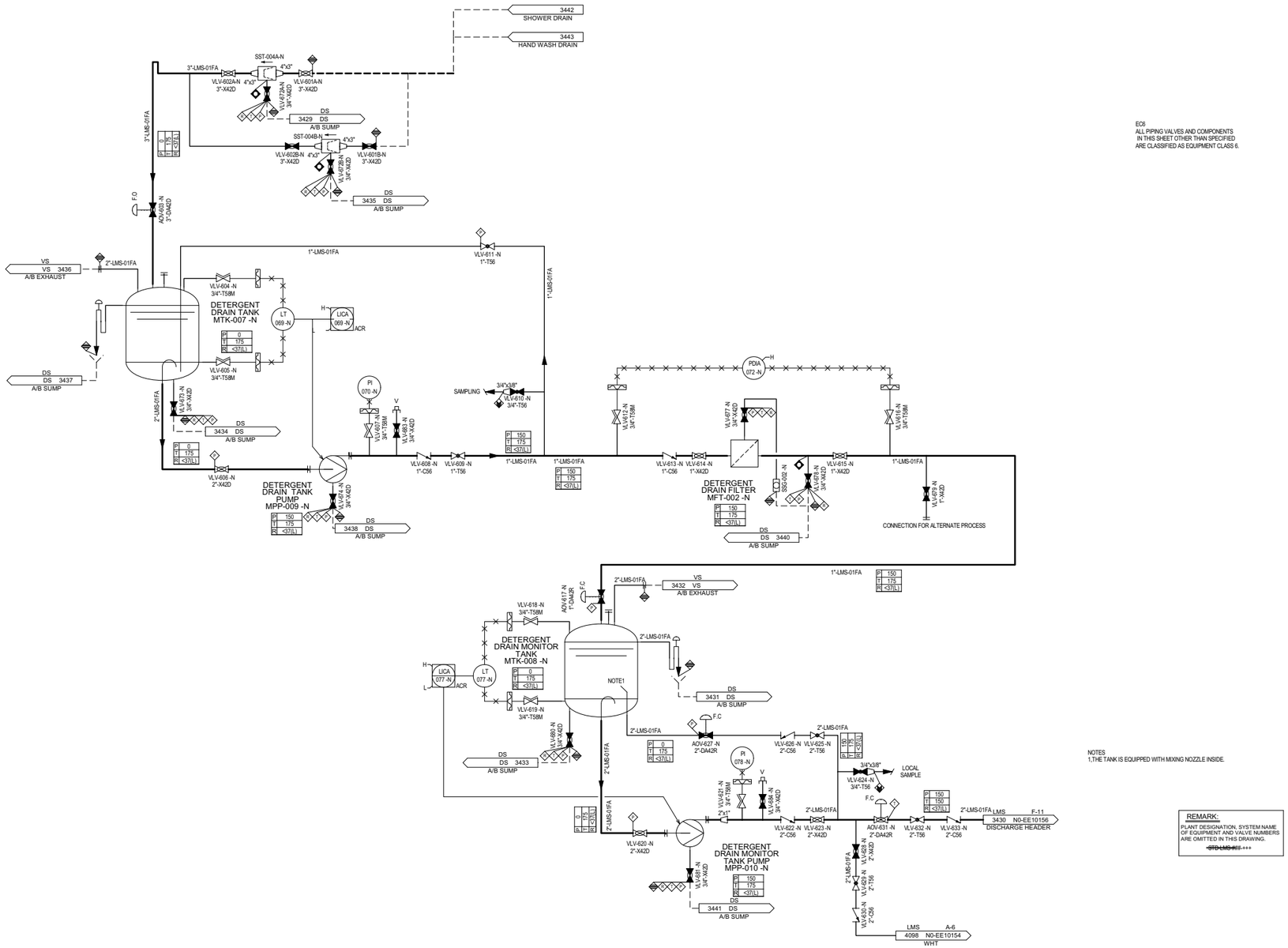


Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 6 of ~~9~~10)

MAP-11-105

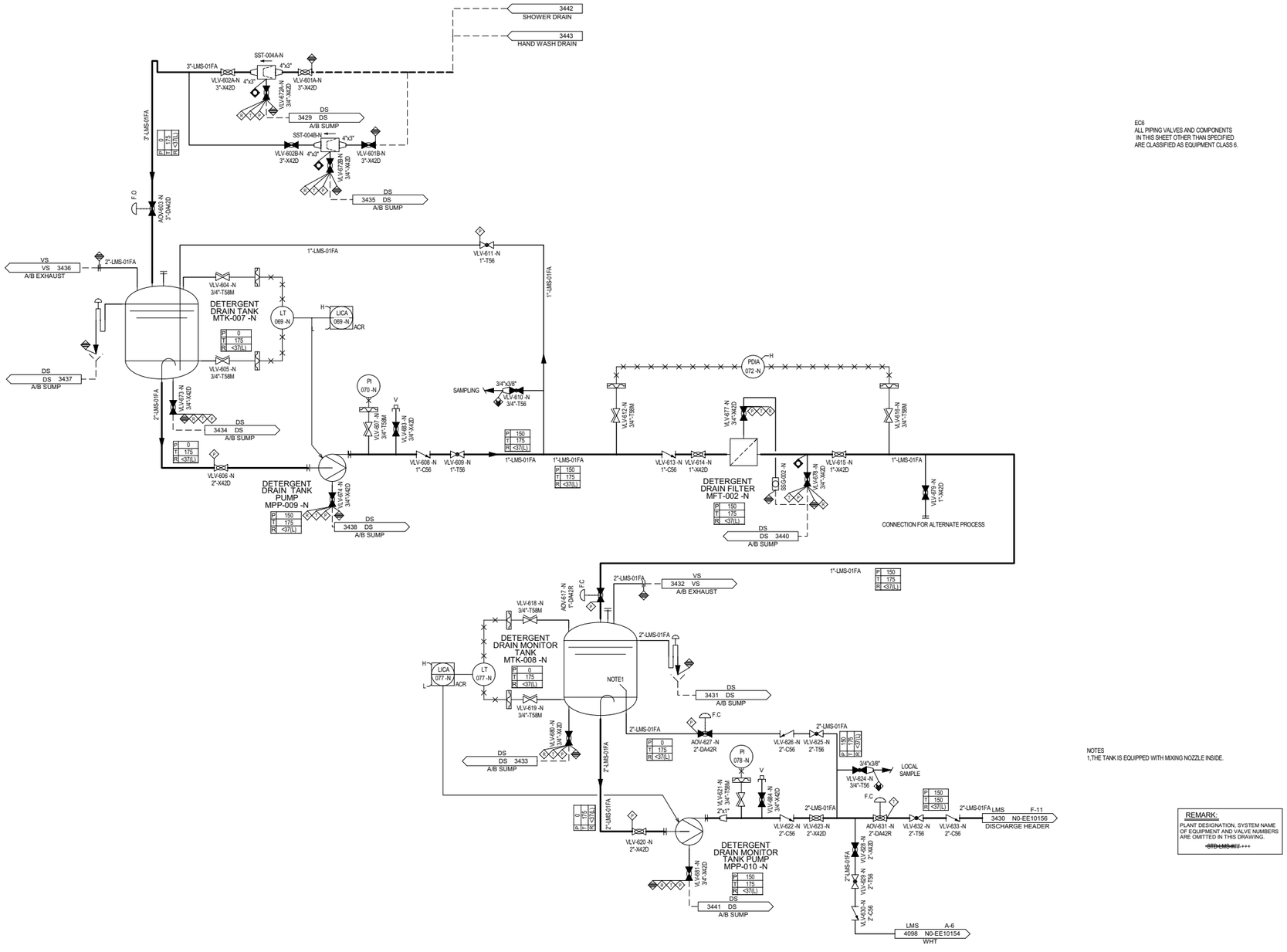


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 7 of ~~9~~10)

RCOL2_11.02-2

MAP-11-105

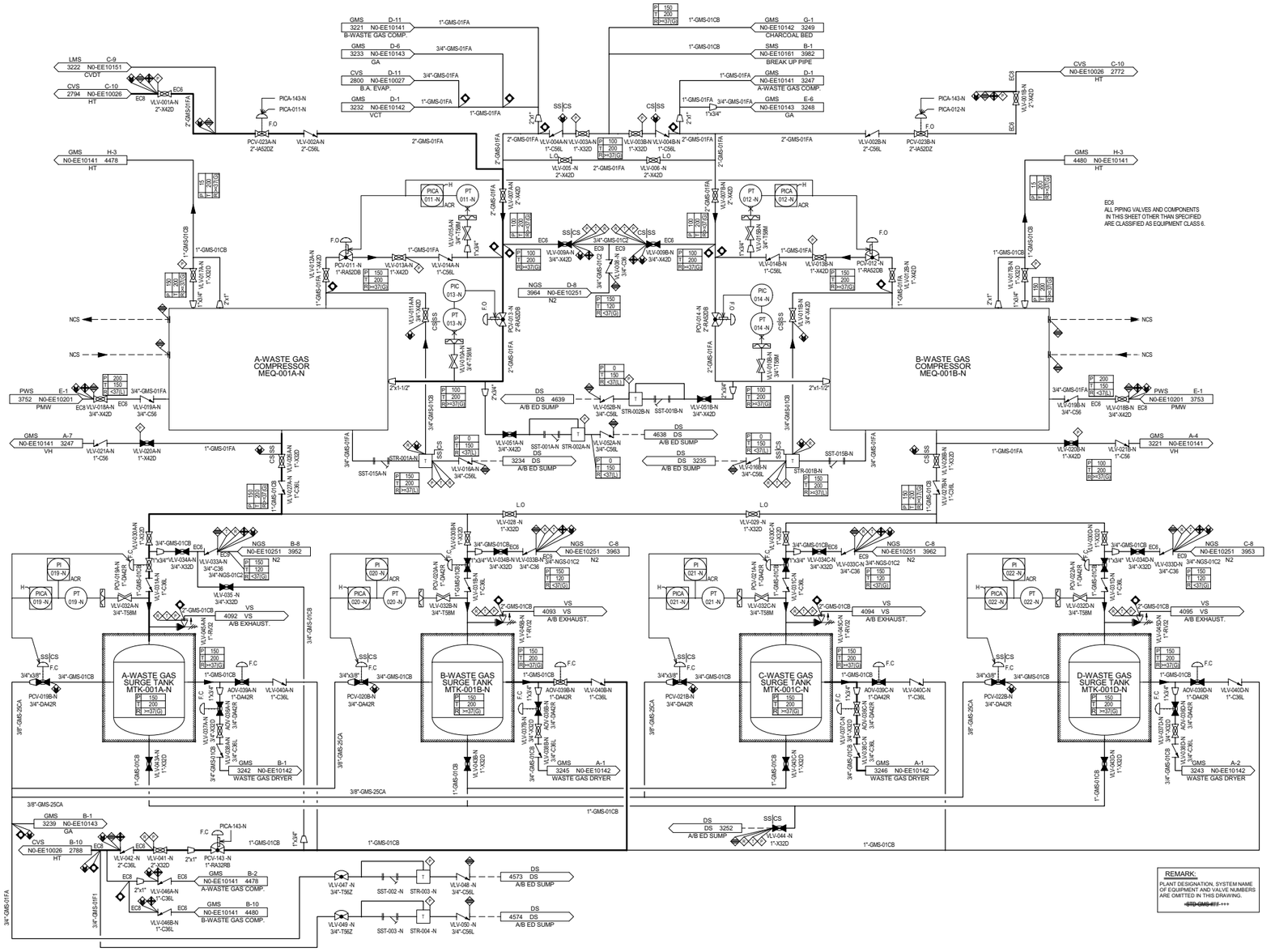


CP COL 11.2(6)

Figure 11.2-201 Liquid Waste Management System Piping and Instrumentation Diagram (Sheet 8 of ~~9~~10)

RCOL2_11.0
2-2

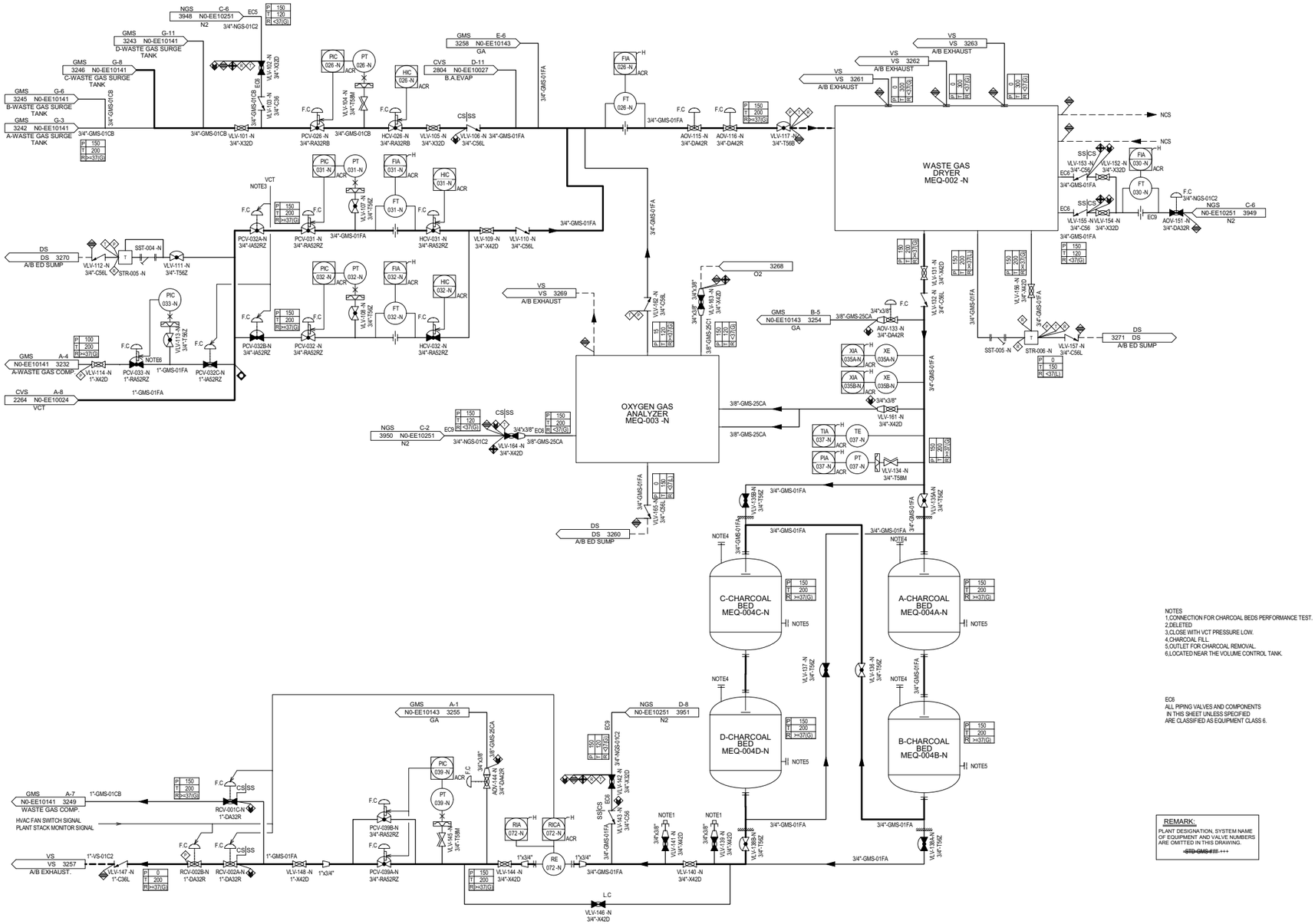
MAP-11-106



STD COL 11.3(9)

Figure 11.3-201 Gaseous Waste Management System Piping and Instrumentation Diagram (Sheet 1 of 3)

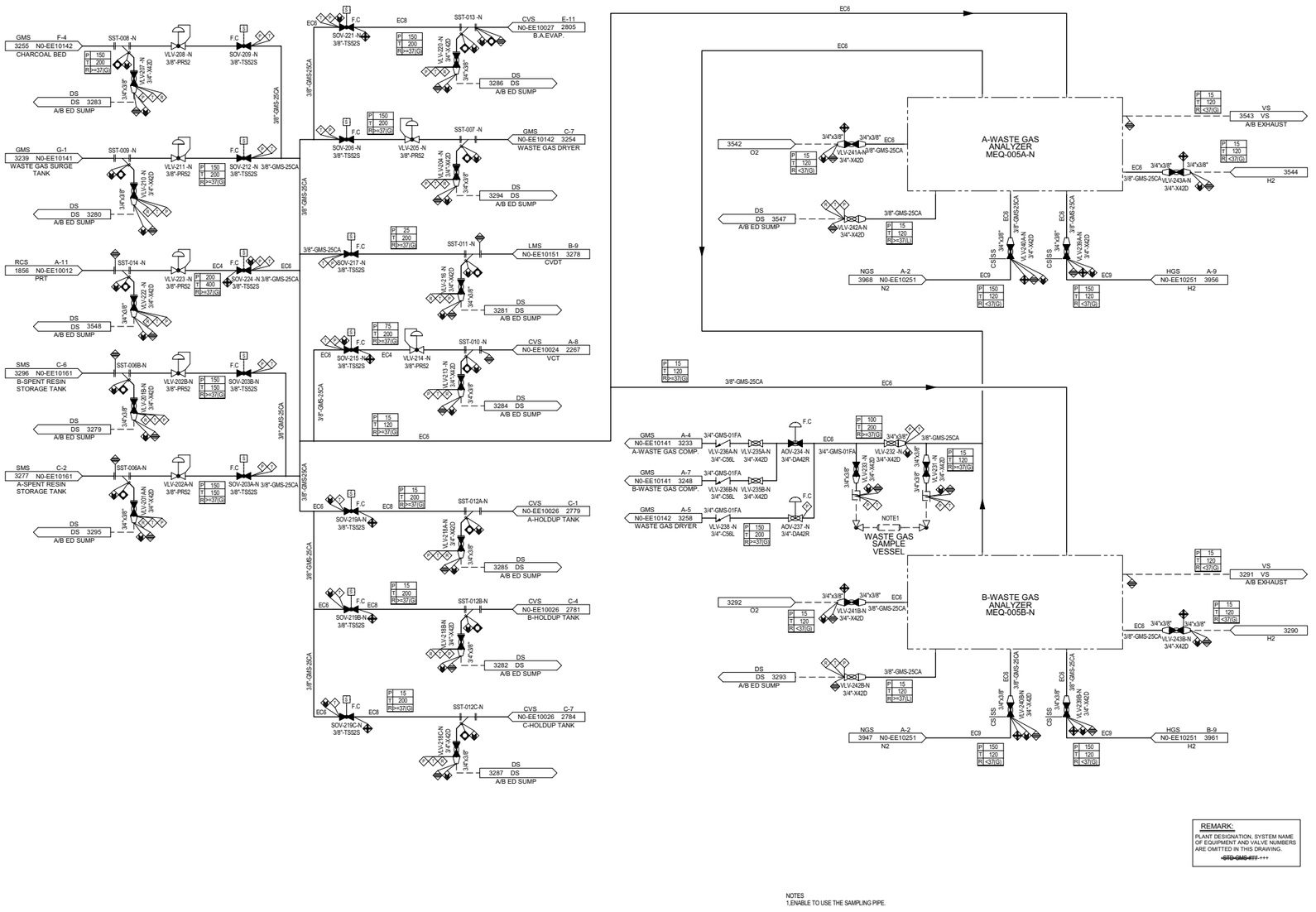
MAP-11-106



STD COL 11.3(9)

Figure 11.3-201 Gaseous Waste Management System Piping and Instrumentation Diagram (Sheet 2 of 3)

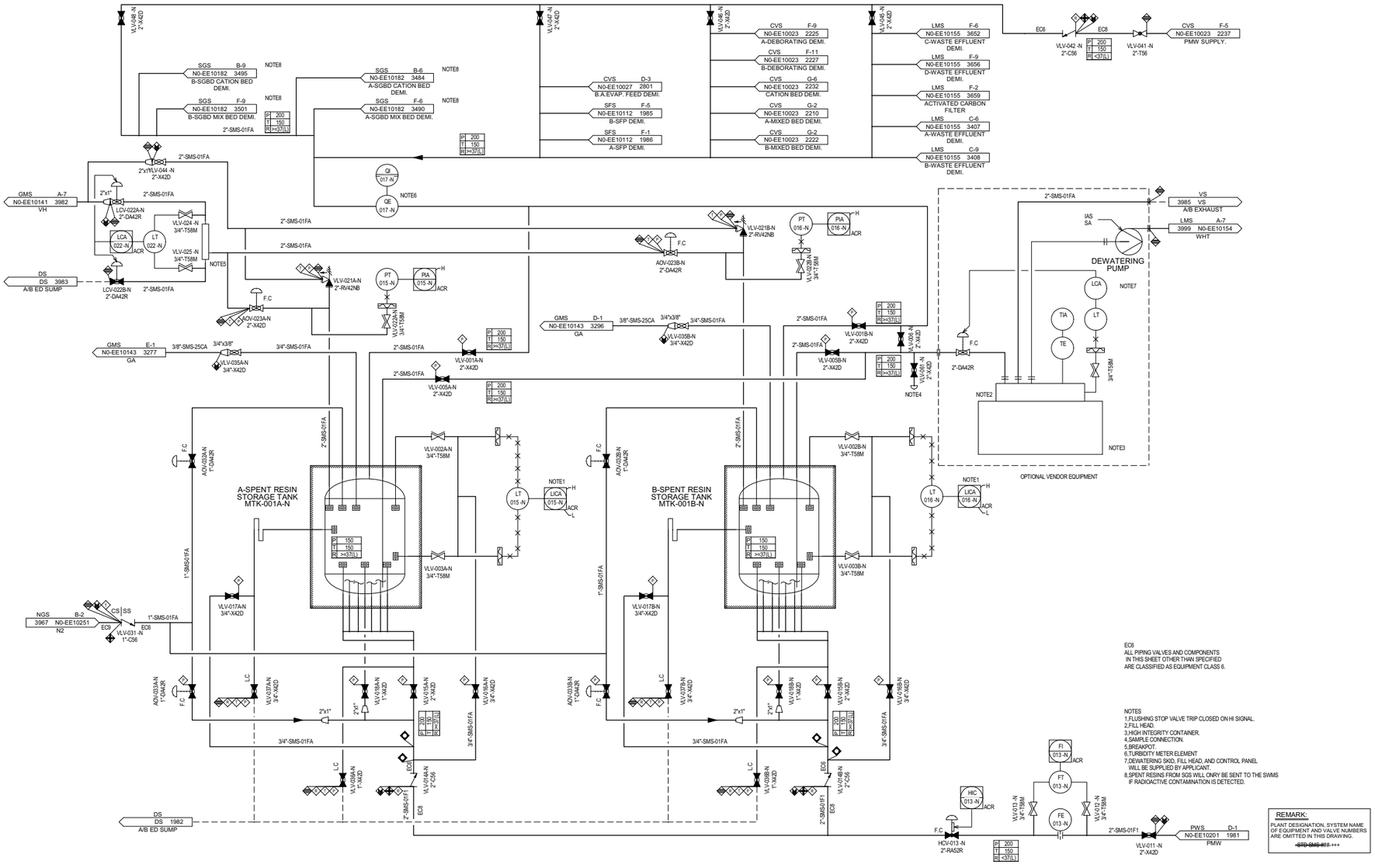
MAP-11-106



STD COL 11.3(9)

Figure 11.3-201 Gaseous Waste Management System Piping and Instrumentation Diagram (Sheet 3 of 3)

MAP-11-107



STD COL 11.4(8)

Figure 11.4-201 Solid Waste Management System Piping and Instrumentation Diagram

Chapter 12

Chapter 12 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
DCD_12.01-2	12.1.3	12.1-2	Delete Outdated RG	Delete RG8.20, 8.26, and 8.32.	0
DCD_12.02-15	12.2.1.1.10	12.2-1	DCD_RAI 12.02-15	Add “40 CFR 190”.	0
CTS-00463	12.5	12.5-1	Clarification	Change description about entry into the interim waste storage building.	0
DCD_12.03-12.04-2	12.1.3	12.1-2	Reflect Response to DCD RAI No. 12.03-12.04-2	Add COL Items	3
CTS-00717	12.2.1.1.10	12.2-1	Clarification	Clarify description of Interim Radwaste Storage/Staging Building	4
HPSV-07	12.4.1.9.2.1	12.4-2	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Identified and added dose sources such as warehouse C, HIC yard.	4
MAP-12-102	12.1.3 12.5	12.1-2 12.5-1 12.5-2	Update	NEI 07-03 Revision 5 is revised as NEI 07-03A Revision 0.	7
CTS-00900	12.2.1.1.10	12.2-1	Revise COLA Holder Item to be COLA Applicant Item	Add "These sources will be incorporated in the updated FSAR." In the end of sixth paragraph.	7
MAP-12-101	Figure 12.3-1R	12.3-3	Consistent with DCD Rev.2	Replace the figure to Reflect layout change.	7
CTS-00879	12.5	12.5-1	Editorial	Version of NEI 07-08 is revised from 1 to 3.	7

12.1.3 Operational Considerations

CP COL 12.1(3) Replace the ~~contents~~ first and second paragraphs in DCD Subsection 12.1.3 with the following. DCD_12.03-12.04-2

The operational radiation protection program for ensuring that operational radiation exposures are as low as reasonably achievable (ALARA) is discussed in Section 12.5, by utilizing of NEI 07-03A (Reference 12.1-26) in combination with existing or modified CPNPP Units 1 and 2 site program information. The program follows the guidance of RG 8.2, 8.4, 8.6, 8.7, 8.9, 8.13, 8.15, 8.25, 8.27, 8.28, 8.29, 8.34, 8.35, 8.36, and 8.38. MAP-12-102 DCD_12.01-2

CP COL 12.1(6) CP COL 12.1(7) Replace the last sentence of third paragraph in DCD Subsection 12.1.3 with the following. DCD_12.03-12.04-2

To achieve this objective, two kinds of operational procedures are developed. First operational procedures are developed to perform periodic review of operational practices to ensure that operating procedures are revised to reflect the installation of new or modified equipment, personnel qualification and training are kept current, and facility personnel are following the operating procedures. The other operational procedures are developed to track implementation of requirements for record retention according to 10 CFR 50.75(g) and 10 CFR 70.25(g) as applicable. This record, containing facility design and construction, facility design changes, site conditions before and after construction, onsite waste disposal and contamination, and results of radiological surveys, is used to facilitate decommissioning. These procedures are related to Plant Radiation Protection Procedures, described in 13.5.2.2.

12.1.4 Combined License Information

Replace the content of DCD Subsection 12.1.4 with the following.

CP COL 12.1(1) ***12.1(1)*** *Policy considerations regarding plant operations*

This Combined License (COL) item is addressed in Subsections 12.1.1.3.1, 12.1.1.3.2 and 12.1.1.3.3.

12.1(2) *Deleted from the DCD.*

CP COL 12.1(3) ***12.1(3)*** *Following the guidance regarding radiation protection*

This COL item is addressed in Subsection 12.1.3.

12.1(4) *Deleted from the DCD.*

CP COL 12.1(5) ***12.1(5)*** *Radiation protection program*

This COL item is addressed in Section 12.5.

12.2 RADIATION SOURCES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

12.2.1.1.10 Miscellaneous Sources

CP COL 12.2(2) Replace the second and third sentences of the sixth paragraph in DCD Subsection 12.2.1.1.10 with the following.

CPNPP Units 3 and 4 have no additional storage space for radwaste inside the plant structures. ~~CPNPP Units 3 and 4 have a plan to store temporarily radioactive wastes/materials in Interim Radwaste Storage/Staging Building outside the plant structures.~~ An additional storage space for radwaste, to be named the Interim Radwaste Storage Building, is planned for the future construction outside the plant structures. The radiation protection program (see Section 12.5) associated with this additional radwaste storage space is in place to ensure compliance with Title 10, Code of Federal Regulations (CFR) Part 20, 40 CFR 190 and to be consistent with the recommendations of RG 8.8. CTS-00717 DCD_12.02-15

CP COL 12.2(2) Replace the second sentence of the seventh paragraph in DCD Subsection 12.2.1.1.10 with the following.

CPNPP Units 3 and 4 have no additional radwaste facilities for dry active waste.

CP COL 12.2(1) Replace the last paragraph in DCD Subsection 12.2.1.1.10 with the following.

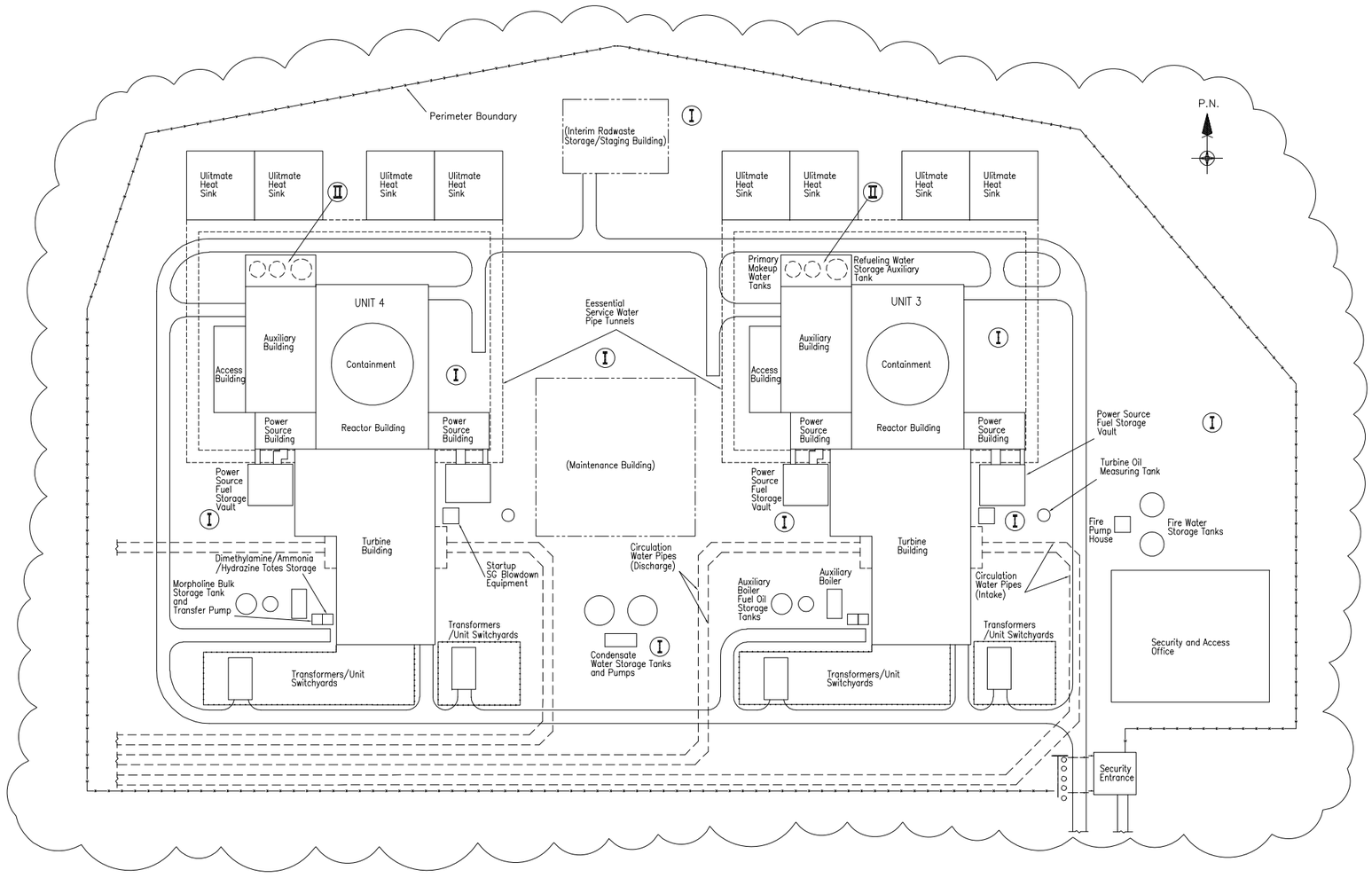
Any additional solid, liquid and gaseous radiation sources that are not identified in Subsection 12.2.1, including radiation sources used for instruments calibration or radiography, will be provided when such site-specific information would become available in the procurement phase. These sources will be incorporated in the updated FSAR. CTS-00900

12.2.3 Combined License Information

Replace the content of DCD Subsection 12.2.3 with the following.

CP COL 12.2(1) ***12.2(1)*** *Additional sources*

MAP-12-101



Zone	Maximum Design Dose Rate
I	≦ 0.25 mrem/h
II	≦ 1 mrem/h
III	≦ 2.5 mrem/h
IV	≦ 15 mrem/h
V	≦ 100 mrem/h
VI	≦ 1 rem/h
VII	≦ 10 rem/h
VIII	≦ 100 rem/h
IX	≦ 500 rad/h
X	> 500 rad/h

CP COL 12.3(4)

Figure 12.3-1R Radiation Zones for Normal Operation/Shutdown Site (Sheet 1 of 34)

12.5 OPERATIONAL RADIATION PROTECTION PROGRAM

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

CP COL 12.1(5) Replace the contents in DCD Section 12.5 with the following.

NEI 07-03A, Generic FSAR Template Guidance for Radiation Protection Program Description, Revision ~~5~~0, is incorporated by reference. Site specific information in radiation protection program will be implemented in accordance with the milestones listed in Table 13.4-201, by utilizing of NEI 07-03A, and NEI 07-08, Generic FSAR Template Guidance for Ensuring that Occupational Radiation Exposures are as Low as is Reasonably Achievable (ALARA), Revision ~~1~~3, in combination with existing or modified CPNPP Units 1 and 2 site program Information. MAP-12-102 MAP-12-102 CTS-00879

Revise the contents of NEI 07-03A, with the following. MAP-12-102

CP COL 12.2(2)
CP COL 12.3(1)

Add the following information after the first paragraph in Subsection 12.5.3.3 of NEI 07-03A. MAP-12-102

In case the National Institute for Occupational Safety and Health/Mine Safety and Health Administration certified equipments are not used, equipments are used to be compliance with 10 CFR 20.1703(b) and 20.1705.

Add the following information after the paragraph in the discussion on Radwaste Handling in Subsection 12.5.4.2 of NEI 07-03A. MAP-12-102

CPNPP Units 3 and 4 have a plan to store temporarily radioactive wastes/materials in Interim Radwaste Storage/Staging Building outside the plant structures. Entry ~~to~~into the radiologically controlled areas of this building is allowed only through the issuance of a Radiation Work Permit. Non-radiologically controlled areas allow for general access. CTS-00463

Add the following information after the third paragraph in Subsection 12.5.4.4 of NEI 07-03A. MAP-12-102

The locations and radiological controls of the radiation zones on plant layout drawings are located in DCD Subsection 12.3.1.2. Administrative controls for restricting access to Very High Radiation Area are provided by Plant Manager's (or designee) approval. Access control for Very High Radiation Areas is controlled

by the gates and entry to these areas is allowed only through the issuance of a Radiation Work Permit. Subsection 12.3.1.2 includes detailed drawings of the very high radiation areas and indicates the physical access controls. Radiation monitor locations for each area are indicated in DCD Subsection 12.3.4.

Add the following information after the sixth paragraph in Subsection 12.5.4.4 of NEI 07-03A. MAP-12-102

The gates provide access control of the fuel transfer tube inspection (Very High Radiation Area) and the area near the seismic gap below the transfer tube. Access control for these areas is controlled by the gates and entry to these areas is allowed only the issuance of a Radiation Work Permit.

Replace the ~~first~~first and second. paragraph in Subsection 12.5.4.12 of NEI 07-03A with the following. MAP-12-102

The radiation protection program and procedures are established, implemented, maintained and reviewed consistent with the 10 CFR 20.1101 and the quality assurance program referenced in Chapter 17.

Chapter 13

Chapter 13 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00484	13.1	13.1-17 13.1-18	Editorial correction	Change location of "Table 13.1-201 (Sheet 5 of 5)".	0
CTS-00486	13.5	13.5-4 13.5-7	Editorial correction	Delete reference 13.5-201.	0
CTS-00488	13AA Table of Contents	13AA-ii	Editorial correction	Modify dot lines in Table of Contents.	0
CTS-00723	13.6	13.6-1	Reflect new rule	Add the new rule for the Cyber Security Plan.	4
CTS-00724	13.6	13.6-1	Update	Delete reference to NEI-03-12 for the physical security plan	4
CTS-00725	13.7	13.7-1	Update	Incorporate latest Rev.4 of NEI 06-06, "Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites".	4
HPSV-09	13.2.1.1.3	13.2-1	NRC information need at HP Safety Site Visit (June 23 and 24,2009)	Added a subsection requiring initial and refresher Hazard Awareness Training.	4
DCD_13.06-21	ACRONYMS AND ABBREVIARIONS	13-v	Reflect Response to DCD RAI No. 282.	Add the Acronyms of "CCTV" and "IDS"	7
	13.6	13.6-1	Reflect Response to DCD RAI No. 282.	Change descriptions following the Response of DCD RAI No.282, 13.6-21.	7
CTS-00898	13.2	13.2-1 13.2-2	Erratum	Change the revision number of NEI 06-13A report and correction of the description with consistency of NEI-06-013A	7
CTS-00797	13.4	13.4-1	Editorial	The first COLA item in 13.4, is changed as follows: Added "required" before "Operational Programs".	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				Deleted “required by regulation” Added the following sentence after the first sentence: “Each operational program is "fully described" in the associated FSAR Sections.”	
CTS-00857	13.4 13.6	13.4-6 13.6-1	Change made to address the new cyber security rule 10CFR 73.54.	Revised STD COL 13.6(1) to add Cyber Security Plan as part of the Security Plan.	7
DCD_13.06-21	13.6.1	13.6-1 13.6-2 13.6-3	To provide additional detail on plant physical security.	Add Subsections 13.6.1, 13.6.2.1, 13.6.2.3, 13.6.2.4, 13.6.2.5 and 13.6.2.6.	7
CTS-00859	13.6.2.2	13.6-2	Change made to provide flexibility to subsequent COL Applicant.	Added statement to delete the last sentence of the first paragraph in DCD Subsection 13.6.2.2.	7
DCD_13.06-77	13.6.2.2	13.6-2	Change made to clarify CAS and SAS.	Replaced last paragraph in DCD Subsection with the following: For CPNPP Units 3 and 4, the alarm station in Unit 3 is designated as the CAS and the alarm station in Unit 4 is designated as the SAS.	7
CTS-00860	13.6.2.5 13.6.2.6	13.6-3	Change made to omit portions of DCD not applicable to Luminant COLA.	Added statement to delete the last sentence of the first paragraph in DCD Subsection 13.6.2.5. Added statement to delete the last paragraph in DCD Subsection 13.6.2.6.	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
DCD_13.06-21	13.6.4	13.6-4	Add a COL Item to address site specific security features and capabilities.	Added 13.6(2) Site specific security features and capabilities.	7
CTS-00859	13.6.4	13.6-4	Add a COL Item to address the identification of Vital Equipment by Subsequent COL applicants	Added 13.6(3) Identification of Vital Equipment by Subsequent COL applicants	7
DCD_13.06-77	13.6.4	13.6-4	Add a COL Item to address the provision of the secondary alarm station by single unit sites.	Added 13.6(4) Provision of the secondary alarm station by single unit sites.	7
DCD_13.06-11 and 21	13.6.4	13.6-4	Add a COL Item to address communication capability with local law enforcement agencies.	Added 13.6(5) Communication capability with local law enforcement agencies.	7
DCD_13.06-21	13.6.5	13.6-4	Revised reference because NEI 03-12, Appendix F is not reviewed by NRC because it has no regulatory basis.	Revise 13.6-201 to read, “Comanche Peak Nuclear Power Plant-Units 3 and 4 Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, Rev. 1, 2009.”	7
CTS-00869	13.7.2	13.7-1	The change is made to identify the correct Rev. of NEI 06-06.	Revised revision of NEI 06-06 from Rev. 3 to Rev. 5, August 2009	7
CTS-00899	13.7	13.7-1	Editorial Change	Change the last sentence of STD COL 13.7 (1) from “Luminant commits to an operating phase program as described in 10 CFR 26.” to “The	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				operating phase fitness-for-duty program will comply with 10 CFR 26.”	

ACRONYMS AND ABBREVIATIONS

ALARA	as low as reasonably achievable
ANS	American Nuclear Society
ANSI	American National Standards Institute
CBP	Computer Based Procedure
CCTV	closed circuit television
CFR	Code of Federal Regulations
COL	Combined License
CPNPP	Comanche Peak Nuclear Power Plant
DCD	Design Control Document
EOP	Emergency Operating Procedure
EPC	engineering, procurement, and construction
FSAR	Final Safety Analysis Report
I&C	instrumentation and control
IDS	intrusion detection system
MHI	Mitsubishi Heavy Industries, Ltd.
MNES	Mitsubishi Nuclear Energy Systems, Inc.
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
NUREG	NRC Technical Report Designation (Nuclear Regulatory
ORC	Operations Review Committee
PBP	Paper Based Procedure
PGP	Procedure Generation Package
QA	quality assurance
QAPD	quality assurance program description
QC	quality control
RG	Regulatory Guide
RO	reactor operator
SORC	Station Operations Review Committee
SRO	senior reactor operator
SRP	Standard Review Plan

DCD_13.06-21

DCD_13.06-21

13.2 TRAINING

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.2(1)
STD COL 13.2(2)
STD COL 13.2(3)
STD COL 13.2(4)
STD COL 13.2(5)

Add the following text to the end of DCD Section 13.2.

NEI 06-13A, "Template for an Industry Training Program Description" Revision ~~1~~2 which includes Appendix A – Cold License Training Plan (Reference 13.2-201), including all subsections, is incorporated by reference. NEI 06-13A provides a complete generic program description for use with COL applications. The document reflects guidance provided by the NRC and by Industry-NRC discussions on training-related issues. A main objective of this program is to assist in expediting NRC review and issuance of the combined license. Chapter 1 of NEI 06-13A states "The results of reviews of operating experience are incorporated into training and retraining programs in accordance with the provisions of TMI Action Item I.C.5, Appendix 1A." CTS-00898 CTS-00898 CTS-00898

13.2.1.1 Program Description

Replace the content of DCD Subsection 13.2.1.1 with the following.

The content of this subsection is discussed above.

13.2.1.1.1 Licensed Plant Staff Training Program

Replace the content of DCD Subsection 13.2.1.1.1 with the following.

The content of this subsection is discussed above.

13.2.1.1.2 Non-Licensed Plant Staff Training Program (to be verified during construction)

Replace the content of DCD Subsection 13.2.1.1.2 with the following.

The content of this subsection is discussed above.

Add the following Subsection after DCD Subsection 13.2.1.1.2. HPSV-09

13.2.1.1.3 Hazards Awareness Training

Workers and operators will receive initial and annual refresher training for protection from chemical hazards and confined space entry in accordance with 29 CFR 1910.

13.2.1.2 Coordination with Preoperational Tests and Fuel Loading

Replace the content of DCD Subsection 13.2.1.2 with the following.

The content of this subsection is discussed above.

13.2.2 Applicable Nuclear Regulatory Commission Documents

Replace the content of DCD Subsection 13.2.2 with the following.

The content of this subsection is discussed above.

13.2.3 Combined License Information

Replace the content of DCD Subsection 13.2.3 with the following.

STD COL 13.2(1) ***13.2(1)*** *Training program*
This COL item is addressed in Section 13.2.

STD COL 13.2(2) ***13.2(2)*** *Training programs for reactor operators.*
This COL item is addressed in Section 13.2.

STD COL 13.2(3) ***13.2(3)*** *Training programs for non-licensed plant staff*
This COL item is addressed in Section 13.2.

STD COL 13.2(4) ***13.2(4)*** *Training programs, including the schedule of each part of the training program for each functional group of employees in the organization*
This COL item is addressed in Section 13.2.

STD COL 13.2(5) ***13.2(5)*** *Extent to which portions of applicable NRC guidance is used in the facility training program or the justification of exceptions*
This COL item is addressed in Section 13.2.

13.2.4 References

Add the following reference after the last reference in DCD Subsection 13.2.4.

13.2-201 *Template for an Industry Training Program Description*, NEI 06-13A, Revision ~~1~~2, Nuclear Energy Institute, March 200~~8~~9. CTS-00898

13.4 OPERATIONAL PROGRAM IMPLEMENTATION

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.4(1) Replace the sentence in the DCD Section 13.4 with the following.

Table 13.4-201 identifies the required Operational Programs ~~required by regulation~~ including the associated FSAR Sections and committed Milestones for implementation. Each operational programs is “fully described” in the associated FSAR Sections. CTS-00797

13.4.1 Combined License Information

Replace the content of DCD Subsection 13.4.1 with the following.

STD COL 13.4(1) ***13.4(1)*** *Operational programs as defined in SECY-05-0197 (Ref. 13.4-1) This COL item is addressed in Section 13.4, including Table 13.4-201.*

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Table 13.4-201 (Sheet 5 of 6)

Operational Programs Required by NRC Regulation and Program Implementation

Item	Program Title	Program Source (Required By)	FSAR (SRP) Section	Implementation	
				Milestone	Requirement
15.	Security Program	10 CFR 50.34(c)			
	• Cyber Security Program	10 CFR 73.54	13.6	Prior to receipt of fuel on-site	License Condition
	• Physical Security Program	10 CFR 73.55 10 CFR 73.56 10 CFR 73.57 10 CFR 26	13.6	Prior to receipt of fuel on-site	License Condition
	• Safeguards Contingency Program	10 CFR 50.34(d) 10 CFR 73, Appendix C	13.6	Prior to receipt of fuel on-site	License Condition
	• Training and Qualification Program	10 CFR 73, Appendix B	13.6	Prior to receipt of fuel on-site	License Condition
16.	Quality Assurance Program Operation	10 CFR 50.54(a) 10 CFR 50, Appendix A (GDC 1) 10 CFR 50, Appendix B	17.5	30 days prior to scheduled date for the initial loading of fuel	10 CFR 50.54(a)(1)
17.	Maintenance Rule	10 CFR 50.65	17.6	Prior to fuel load authorization per 10 CFR 52.103(g)	10 CFR 50.65(a)(1)

CTS-00857

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13.6 SECURITY

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.6(1) Replace the first paragraph in ~~the~~ DCD Subsection 13.6 with the following: CTS-00857

The Security Plan consists of the physical security plan, training and qualification plan, ~~and~~ the safeguards contingency plan. The Security Plan and Cyber Security Plan are ~~is~~ submitted to the NRC as ~~a~~ separate licensing documents to fulfill the requirements of 10 CFR 52.79(a)(35) and 10 CFR 52.79(a)(36). The Security Plan and Cyber Security Plan meet~~s~~ the requirements contained in 10 CFR 26 and 10 CFR 73 and will be maintained in accordance with the requirements of 10 CFR 52.98. The Security Plan is categorized as security safeguards Information and is withheld from public disclosure pursuant to 10 CFR 73.21. CTS-00723 CTS-00857

~~The physical security plan during construction, including control of access to the new plant construction site, is consistent with NEI 03-12, Appendix F (Reference 13.6-201), which is currently under NRC review.~~ CTS-00724

13.6.1 Physical Security – Combined License

DCD_13.06-21

Replace the content of DCD Subsection 13.6.1 with the following:

As stated above, the Security Plan and the Cyber Security Plan are submitted to the NRC as separate licensing documents to fulfill the requirements of 10 CFR 52.79(a)(35) and 10 CFR 52.79(a)(36). The site specific physical security features and capabilities that are beyond the scope of the certified standard plant design are described in the CPNPP Units 3 and 4 physical security plan (PSP) (Ref. 13.06-201) and in Section 13.6.2 below.

13.6.2.1 Barriers, Isolation Zone, and Controlled Access Points

Replace the content of DCD Subsection 13.6.2.1 with the following:

[ ] (SRI)

DCD_13.06-21

(SRI)

13.6.2.2 Vital Areas and Vital Equipment

CTS-00859

Delete the last sentence of the first paragraph in DCD Subsection 13.6.2.2.

Replace the last paragraph in DCD Subsection 13.6.2.2 with the following:

DCD_13.06-77

(SRI)

13.6.2.3 Alarm Systems and Detection Aids

DCD_13.06-21

Replace the second paragraph in DCD Subsection 13.6.2.3 with the following:

[ ] (SRI)

13.6.2.4 Security Lighting

DCD_13.06-21

Replace the content of DCD Subsection 13.6.2.4 with the following:

[ ] (SRI)

13.6.2.5 Security Communication Systems

CTS-00860

Delete the last sentence of the first paragraph in DCD Subsection 13.6.2.5.

DCD_13.06-21

Replace the last sentence of the last paragraph in DCD Subsection 13.6.2.5 with the following:

[ ] (SRI)

13.6.2.6 Security Power

CTS-00860

Delete the last paragraph in DCD Subsection 13.6.2.6.

13.6.4 Combined License Information

Replace the content of DCD Subsection 13.6.4 with the following.

STD COL 13.6(1) ***13.6(1)*** *The plant overall security plan and implementation schedule*
This COL item is addressed in Section 13.6.

13.6(2) *Site specific security features and capabilities.*
This COL item is addressed in Section 13.6.2 and the physical security plan. DCD_13.06-21

13.6(3) Identification of Vital Equipment by Subsequent COL Applicants.
To the extent applicable, this COL item is addressed in Section 13.6.2.2. CTS-00859

13.6(4) *Provision of the secondary alarm station by single unit sites.*
To the extent applicable, this COL item is addressed in Section 13.6.2.2. DCD_13.06-77

13.6(5) *Communication capability with local law enforcement agencies.*
This COL item is addressed in Section 13.6.2.5 and the physical security plan. DCD_13.06-11 DCD_13.06-21

~~**13.6.5 References**~~ CTS-00724

~~Add the following reference after the last reference in DCD Subsection 13.6.5.~~

~~13.6-201 Nuclear Energy Institute, *Security Measures during New Reactor Construction*, NEI 03-12, Appendix F, Revision 2, 2007.~~

13.6.5 References DCD_13.06-21

Add the following reference after the last reference in DCD Subsection 13.6.5.

13.6-201 Comanche Peak Nuclear Power Plant - Units 3 and 4 Security Plan, Training and Qualification Plan, Safeguards Contigency Plan, Revision 1, 2009.

13.7 FITNESS FOR DUTY

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

STD COL 13.7(1) Replace the contents of DCD Section 13.7 with the following.

The fitness for duty program is implemented and maintained in two phases - the construction phase program and the operating phase program. The phases are implemented as indicated in Table 13.4-201. The construction phase program is consistent with NEI 06-06 (Reference 13.7-201). ~~Luminant commits to an~~The operating phase fitness-for-duty program ~~as described~~will comply with in 10 CFR 26. CTS-0899

13.7.1 Combined License Information

Replace the content of DCD Subsection 13.7.1 with the following.

STD COL 13.7(1) ***13.7(1)*** *Operating and construction plant fitness-for-duty programs*
This COL item is addressed in Section 13.7.

13.7.2 References

Add the following reference after the last reference in DCD Subsection 13.7.2.

13.7-201 Nuclear Energy Institute, Fitness for Duty Program Guidance for New Nuclear Power Plant Construction Sites, NEI 06-06, Revision ~~3~~5, February 200~~8~~9. CTS-00725 CTS-00869

Chapter 14

Chapter 14 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00635	14.2.2	14.2-1	Editorial correction	Change "Replace the last paragraph" to "Replace the last sentence of the second paragraph". Change "Appendix 14AA provides a description ...." to " A description .... are reconciled in Appendix 14AA".	0
RCOL2_14.03-1	14.2.12 14.2.12.1 14.2.13 Table 14.2-201	14.2-3 14.2-7 14.2-8	Responses to RAI No. 1 Luminant Letter TXNB-09010 Dated 5/1/2009	Add new item to ensure verification that local offsite fire departments utilize hose threads or adapters capable of connecting with onsite hydrants, hose couplings, and standpipe risers.	-
DCD_14.02-114	14.2.3 14.2.8.2.1 14.2.13	14.2-1 14.2-2 14.2-7	Reflect Response to DCD RAI No. 271.	Add description of STD COL 14.2(11) and STD COL 14.2(12) in accordance with DCD RAI No.271.	3
DCD_14.02-23	14.2.8.1	14.2-2	Reflect Response to DCD RAI No. 31.	Add description of STD COL 14.2(11) in accordance with DCD RAI No.31.	3
	14.2.13	14.2-7			
DCD_14.02-8	ACRONYMS AND ABBREVIATIONS	14-iv	Reflect Response to DCD RAI No.27	Add “Station Operations Review Committee”	4
	14.2.1	14.2-1	Reflect Response to DCD RAI No.27	Delete Subsection 14.2.1.	4
	14.2.2	14.2-1	Reflect Response to DCD RAI No.27	Delete reference to Appendix 14AA and revise text.	4
	14.2.3	14.2-1	Reflect Response to	Delete Subsection 14.2.3	4

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
			DCD RAI No.27		
	14.2.4 14.2.5 14.2.6	14.2-1 14.2-2	Reflect Response to DCD RAI No.27	Delete Subsection 14.2.4, 14.2.5 and 14.2.6.	4
	14.2.11	14.2-3	Reflect Response to DCD RAI No.27	Change COL information number	4
	14.2.13	14.2-7	Reflect Response to DCD RAI No.27	Revise COL information.	4
	Appendix 14AA		Reflect Response to DCD RAI No.27	Delete Appendix 14AA.	4
DCD_14.02-90	14.2.12	14.2-3	Reflect Response to DCD RAI No.93	Revise the description of replaced portion for COL information	4
CTS-00818	14.2.12.1.114	14.2-6	Editorial correction	Add “unit heater” on the first numbered list of “C. Test Method” in order to make it consistent with Part 10 ITAAC description.	6
MAP-14-101	Table 14.2-202 (Sheet 1 of 5)	14.2-9	Editorial/ Reconciliation correction	Add the Tier 1 section number for the Pressurizer Safety Valve (SDV) to make it consistent with ITAAC changes in the Tier 1 tracking report Revision 3.	6
MAP-14-102	Table 14.2-202 (Sheet 2 of 5)	14.2-10	Editorial/ Reconciliation correction	Delete the parentheses around the Tier 1 section number for the Feedwater system, to make it consistent with ITAAC changes in the Tier 1 tracking report Revision 3. It was previously incorrectly as an inspection activity.	6
DCD_14.03-4	Table 14.2-202 (Sheet 2 of 5)	14.2-10	Reflect Response to DCD RAI No.32	Delete the parentheses around the Tier 1 section number for the	6

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				"480 V Class Switchgear" and around "480 V Class 1E Motor Control Center"	
DCD_09.05.03-6 DCD_09.05.03-9	Table 14.2-202 (Sheet 2 of 5)	14.2-10	Reflect Response to DCD RAI No.34	Delete the parentheses around the Tier 1 section number for the "Emergency Lighting System".	6
DCD_14.03.05-04	Table 14.2-202 (Sheet 2 of 5)	14.2-10	Reflect Response to DCD RAI No.181	Delete "2.5.1" in the Tier 1 section column for "Class 1E Bus Load Sequence" and "125 V Direct Current(dc) Class 1E"	6
DCD_06.02.06-13	Table 14.2-202 (Sheet 3 of 5)	14.2-11	Reflect Response to DCD RAI No.50	Add "2.2" on Tier 1 section column of Containment Local Leakrate	6
DCD_14.03.11-30	Table 14.2-202 (Sheet 3 of 5)	14.2-11	Reflect Response to DCD RAI No.222	Delete parentheses around Tier 1 section number for Containment Hydrogen Monitoring and Control System	6
DCD_14.02-112	Table 14.2-202 (Sheet 4 of 5)	14.2-12	Reflect Response to DCD RAI No.243	Add "2.4.7" on Tier 1 section column of Liquid Waste Management System	6
DCD_14.02-109	Table 14.2-202 (Sheet 4 of 5)	14.2-12	Reflect Response to DCD RAI No.243	Add parentheses around "2.7.6.8" on Tier 1 section column of Liquid Waste Management System	6
MAP-14-103	Table 14.2-202 (Sheet 4 of 5)	14.2-12	Editorial/ Reconciliation correction	Delete the parentheses around the Tier 1 section number for "Steam Generator Blowdown System" for making alignment with ITAAC changes of Tier 1 tracking report revision 3.	6
CTS-00822	Table 14.2-202 (Sheet 4 of 5)	14.2-12	Editorial correction	Add "2.8" on Tier 1 section column of Auxiliary Building HVAC	6

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				System	
DCD_14.03.11-30	Table 14.2-202 (Sheet 5 of 5)	14.2-13	Reflect Response to DCD RAI No.222	Delete the parentheses around the Tier 1 section number for Non-Essential Chilled Water System	6
DCD_14.02-112	Table 14.2-202 (Sheet 5 of 5)	14.2-13	Reflect Response to DCD RAI No.243	Add Test Description of "RCPB Leak Detection Systems Preoperational Test"	6
DCD_14.02-109	Table 14.2-202 (Sheet 5 of 5)	14.2-13	Reflect Response to DCD RAI No.243	Add Test Description of "Equipment and Floor Drainage System Preoperational Test"	6
DCD_14.02-116	Table 14.2-202 (Sheet 5 of 5)	14.2-13	Reflect Response to DCD RAI No.337	Add Test Description of "Compressed Gas System Preoperational Test"	6
DCD_14.03.06-15	14.3.4.6	14.3-1	Reflect response to DCD RAI No.424	Added STD COL 14.3(1), ITAAC for Electrical Systems.	7
DCD_13.06-21	14.3.4.12	14.3-1	Reflect response to DCD RAI No.282	Added STD COL 14.3(3), ITAAC for Physical Security Hardware.	7
DCD_14.03.06-15	14.3.6	14.3-2	Reflect response to DCD RAI No.424	Added STD COL 14.3(1), ITAAC revised for site specific systems and that it is addressed in 14.3.4.6.	7
DCD_13.06-21	14.3.6	14.3-2	Reflect response to DCD RAI No.282	Added STD COL 14.3(3), ITAAC for Physical Security Hardware and that it is addressed in Subsection 14.3.4.12.	7

14.3 INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

14.3.4.6 ITAAC for Electrical Systems

DCD_14.03.06-15

STD COL 14.3(1) Add the following paragraph as the last paragraph in DCD Subsection 14.3.4.6.

The ITAAC for the site-specific interfaces in the electrical systems are developed to correspond to Section 3.2 of Tier 1 of the referenced DCD. The site-specific interfaces are the offsite power system and the ITAAC for the interface requirement with the offsite power system is provided in Part 10 of the Combined License Application (COLA).

14.3.4.7 ITAAC for Plant Systems

CP COL 14.3(1) Replace the last paragraph in DCD Subsection 14.3.4.7 with the following.

The selection criteria and methodology provided in Section 14.3 of the referenced DCD are utilized as the site-specific selection criteria and methodology for ITAAC for site-specific systems. In general, the ITAAC for site-specific systems are developed to correspond to the interface requirements in Tier 1 of the referenced DCD. For those site-specific systems that do not have a safety function sufficiently significant to meet the selection criteria for ITAAC, the system is identified with the designation “No entry for this system”. ITAAC for the site-specific portion of the plant systems are provided in Part 10 of the Combined License Application (COLA). There are only two site-specific systems, the UHS system and ESWS (portions of the outside scope of the certified design) including the site-specific structures, and the UHS ESWS pump house ventilation system, which are addressed in Part 10 of the COLA.

14.3.4.10 ITAAC for Emergency Planning

STD COL 14.3(2) Replace the last paragraph in DCD Subsection 14.3.4.10 with the following.

The selection criteria and methodology provided in Section 14.3 of the referenced DCD are utilized as the site-specific selection criteria and methodology for the facility's emergency planning ITAAC. The ITAAC conform to the guidance in this subsection, as modified to reflect the design and specific emergency planning program requirements. The ITAAC for the facility's emergency planning are provided in Part 10 of the COLA.

14.3.4.12 ITAAC for Physical Security Hardware

DCD_13.06-21

STD COL 14.3(3) Replace the last paragraph in DCD Subsection 14.3.4.12 with the following.

The selection criteria and methodolgy provided in Section 14.3 of the referenced DCD are utilized as the site-specific selection criteria and methodology for site-specific physical security hardware ITAAC not addressed in the DCD. The ITAAC conform to the guidance in this subsection and are consistent with the applicable generic physical security ITAAC in SRP 14.3.12 (Reference 14.3-16) developed by the NRC in coordination with the Nuclear Energy Institute. The site-specific physical security hardware ITAAC are provided in Part 10 of the COLA.

14.3.6 Combined License Information

Replace the content of DCD Subsection 14.3.6 with the following.

STD COL 14.3(1) CP COL 14.3(1) ***14.3(1)*** *ITAAC for ~~plant~~site-specific systems*

DCD_14.03.06-15

This COL item is addressed in Subsections 14.3.4.6 and 14.3.4.7

STD COL 14.3(2) ***14.3(2)*** *ITAAC for emergency planning*

This COL item is addressed in Subsection 14.3.4.10.

STD COL 14.3(3) ***14.3(3)*** ~~Deleted from the DCD.~~*ITAAC For Physical Security Hardware*

DCD_13.06-21

This COL item is addressed in Subsection 14.3.4.12

Chapter 15

Chapter 15 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R

Chapter 16

Chapter 16 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-16-101	16.1.1.2	16.1-1 16.1-2	Consistent with DCD change	Replaced “shall be identified as a license condition” with “is a requirement of the Technical Specifications” and added “and reviewed and approved by NRC” for CRMP and SFCP.	7

16.0 TECHNICAL SPECIFICATIONS

16.1 TECHNICAL SPECIFICATIONS

This section of the referenced Design Control Document (DCD) is incorporated by reference with the following departures and/or supplements.

16.1.1 Introduction to Technical Specifications

STD SUP 16.1(1) Add the following text in DCD Subsection 16.1.1.

The US-APWR Technical Specifications and Bases in DCD are not incorporated by reference within Part 2 of the COL Application because they are not considered Tier 2 information. The US-APWR Technical Specifications and Bases in DCD are incorporated by reference into Section B of Part 4 of the COL Application.

16.1.1.2 Technical Specifications Content

CP COL 16.1(1)
CP COL 16.1(2) Replace the first sentence of the first paragraph in DCD Subsection 16.1.1.2 (6) with the following.

The Comanche Peak Nuclear Power Plant (CPNPP) Units 3 and 4 adopt Risk-Managed Technical Specifications (RMTS) and Surveillance Frequency Control Program (SFCP), which have been developed under the Risk-Informed Technical Specifications Initiatives 4b and 5b.

CP COL 16.1(1) Replace the fourth paragraph in DCD Subsection 16.1.1.2 (6) with the following.

The CPNPP will establish the Configuration Risk Management Program (CRMP) including the above mentioned subjects. This program assures the implementation of the plant-specific RMTS before the actual plant operation as indicated in Section 5.5.18 “Configuration Risk Management Program” of the US-APWR Technical Specifications. The establishment of the CRMP ~~shall be identified as a license condition~~is a requirement of the Technical Specifications and shall be completed, and reviewed and approved by NRC prior to the initial fuel loading. MAP-16-101

CP COL 16.1(2) Replace the second sentence of the sixth paragraph in DCD Subsection 16.1.1.2 (6) with the following.

The administrative controls section of the Technical Specifications specifies the requirements for SFCP and the CPNPP will establish this program to control Surveillance Frequencies and make future changes to the Surveillance Requirement Frequencies.

CP COL 16.1(2) Replace the eighth paragraph in DCD Subsection 16.1.1.2 (6) with the following.

The establishment of the SFCP ~~shall be identified as a license condition~~is a requirement of the Technical Specifications and shall be completed, and reviewed and approved by NRC prior to the initial fuel loading. MAP-16-101

Chapter 17

Chapter 17 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
CTS-00490	17.3	17.3-1	Editorial correction	Change description about quality assurance program.	0
MAP-17-102	17.4.7	17.4-3	Consistent with DCD Rev. 2	Add “Phases II and III of the D-RAP occur before initial fuel load.” After “Add the following paragraphs after the paragraph in DCD Subsection 17.4.7”	7
MAP-17-101	17.4.7	17.4-3	Consistent with DCD Rev. 2	Replace “The O-RAP, which addresses the specific plant operation and maintenance activities, will be implemented prior to the initial fuel loading” with “The O-RAP, which addresses the specific plant operation and maintenance activities, will be developed and implemented prior to the initial fuel loading by integrating the RAP activities into the specific plant operational program (Maintenance Rule, surveillance testing, in-service inspection, in-service testing, and QA, as appropriate”.	7

SSCs, the maintenance of the reliability of risk-significant SSCs, and monitoring of the effectiveness of maintenance needed for reliability assurance. Industry operational experience will be used in the monitoring process to verify that reliability assumptions remain valid.

The scope of the Maintenance Rule Program includes safety-related SSCs and certain nonsafety-related SSCs, as determined using a Maintenance Rule scoping procedure, consistent with SECY 95-132. Procurement, fabrication, construction, and test specifications for safety-related and nonsafety-related SSCs within the scope of the RAP are prepared and implemented under QAP referenced in Sections 17.1, 17.2, 17.3, and 17.5. These elements of the QAPs provide adequate confidence that SSCs will perform satisfactorily in service and ensure that significant assumptions, such as equipment reliability, are realistic and achievable.

17.4.7 D-RAP

CP COL 17.4(1)
CP COL 17.4(2)

Add the following paragraphs after the paragraph in DCD Subsection 17.4.7.

Phases II and III of the D-RAP occur before initial fuel load. MAP-17-102

Phase II, the site-specific phase, introduces the site-specific design information to the D-RAP process.

The program of Phase III, the last phase of the D-RAP, will be established prior to the procurement, fabrication, construction, and pre-operational testing.

~~The O-RAP, which addresses the specific plant operation and maintenance activities, will be implemented prior to the initial fuel loading.~~The O-RAP, which addresses the specific plant operation and maintenance activities, will be developed and implemented prior to the initial fuel loading by integrating the RAP activities into the specific plant operational program (Maintenance Rule, surveillance testing, in-service inspection, in-service testing and QA, as appropriate). MAP-17-101

CP COL 17.4(1)

Add the following new Subsection after the last paragraph in DCD Subsection 17.4.7.3.

Chapter 18

Chapter 18 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R

Chapter 19

Chapter 19 Tracking Report Revision List

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-19-001	19.1.5.1.1	19.1-8 19.3-1	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 19.3(5)	0
MAP-19-002	19.2.5	19.2-1 19.3-1	Deletion of COL item. Letter MHI Ref:UAP-HF-08259, dated on Nov.7, 2008	Delete COL 19.3(6)	0
CTS-00491	ACRONYMS AND ABBREVIATIONS	19-v	Erratum	Change “Westuinghouse” to “Westinghouse”.	0
CTS-00714	19.2.5 19.2.7 19.3.3	19.2-1 19.2-4 19.3-1	Restoration of COL item. Letter MHI Ref: UAP-HF-09305 dated June10,2009	Restoration COL 19.3(6)	3
MAP-19-003	19.1.7.3	19.1-10	Consistent with DCD Rev. 2	Delete entire Section 19.1.7.3	6
CTS-00781	19.1.7.6	19.1-10	Consistent with DCD Rev. 2	Replace “Luminant will update PRA and severe accident (SA) evaluation considering the site specific design before the first fuel load, and the obtained PRA insights will be provided as requested to implement the RMTS and SFCP.” With “The PRA needed for implementation of RMTS and SFCP will be available one year prior to fuel load.”	6

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
MAP-19-003	19.3.3	19.3-1	Consistent with DCD Rev. 2	Delete COL 19.3(3)	6
RCOL2_19-1	19.1.5	19.1-7	Response to RAI No. 26 Luminant Letter no.TXNB-09047 Date 9/22/2009	Replace “6E-08/RY” with “7E-08/RY”.	-
RCOL2_19-1	Table 19.1-203	19.1-13	Response to RAI No. 26 Luminant Letter no.TXNB-09047 Date 9/22/2009	Descriptions under “Wind Speed”, Assumed Impact on Plant”, “Frequency(/yr)”, “CCDP”, and “CDF(/RY) are changed.	-
RCOL2_19-2	19.1.5	19.1-4	Response to RAI No. 26 Luminant Letter no.TXNB-09047 Date 9/22/2009	Descriptions on performance of screening of external events are added.	-
RCOL2_19-2	Table 19.1-201	19.1-11	Response to RAI No. 26 Luminant Letter no.TXNB-09047 Date 9/22/2009	Add a new table “Table 19.1-201 Comanche Peak Units 3 and 4 External Events Screening and Site Applicability” before “Table 19.1-201 Tornado Strike and Exceedance Frequency for the Comanche Peak Site”.	-
RCOL2_19-5	19.1.4.1.2	19.1-3	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Replace “Therefore, any discrepancy of importance, cutsets, and dominant sequences from that documented for the standard US-APWR design is considered negligible and the results described below	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				are considered sufficient and applicable" with "Therefore, any discrepancy of cutsets, and dominant sequences from that documented for the standard US-APWR design is considered negligible. Changes in importance are the basic events related to the site-specific design shown in Table 19.1-202. The results described below are considered sufficient and applicable"	
RCOL2_19-5	19.1.7.1	19.1-9	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add "Add the following text after the last sentence of DCD Subsection 19.1.7.1. Site-specific key assumptions are summarized in Table 19.1-206."	-
RCOL2_19-5	Table 19.1-201	19.1-11	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add a new table "Table 19.1-202 Important Basic Event related to the Site-Specific Design" before "Table 19.1-201 Tornado Strike and Exeedance Frequency for the Comanche Peak Site".	-
RCOL2_19-5	Figure 19.1-201	19.1-14	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add a new table "Table 19.1-206 Site-specific Key Assumptions" before "Figure 19.1-201 Point Estimate Probability of Tornado Exceeding Maximum Wind Speed at the Comanche Peak Site".	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_19-5	Figure 19.1-201	19.1-14	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add a new figure "Figure 19.1-2R Simplified System Diagram (Sheet 18 of 36) (Essential Service Water System [2of2]" before "Figure 19.1 Point Estimate Probability of Tornado Exceeding Maximum Wind Speed at the Comanche Peak Site".	-
RCOL2_19-6	19.1.4.1.2	19.1-3	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Delete "assuming nominal conditions but the hottest day of the year. This can be achieved by one fan per tower operating".	-
RCOL2_19-6	19.1.7.1	19.1-9	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add "Add the following text after the last sentence of DCD Subsection 19.1.7.1. Site-specific key assumptions are summarized in Table 19.1-206."	-
RCOL2_19-6	Figure 19.1-201	19.1-14	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add a new table "Table 19.1-206 Site-specific Key Assumptions" before "Figure 19.1-201 Point Estimate Probability of Tornado Exceeding Maximum Wind Speed at the Comanche Peak Site".	-
RCOL2_19-7	19.1.5	19.1-4	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Descriptions on performance of screening of external events are added.	-

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
RCOL2_19-7	Table 19.1-201	19.1-11	Response to RAI No. 28 Luminant Letter no.TXNB-09048 Date 9/24/2009	Add a new table “Table 19.1-201 Comanche Peak Units 3 and 4 External Events Screening and Site Applicability” before “Table “Table 19.1-201 Tornado Strike and Exceedance Frequency for the Comanche Peak Site”.	-
MAP-19-005	19.1.5	19.1-5	DCD change due to US-APWR design revision, which is reflected in DCD rev. 2	Delete “Selector circuit and breakers of the alternative ac supply system”.	7
MAP-19-005	19.1.5	19.1-6	DCD change due to US-APWR design revision, which is reflected in DCD rev. 2	Replace “Tornado induced failure of the T/B has a potential effect on the selector circuit of the non-safety power source, which is located inside the T/B. When this selector circuit is damaged or accessibility to this equipment is prevented, the non-safety gas turbine generators cannot supply power to the safety bus. These non-safety gas turbine generators are located in the power source building, which is a seismic category I structure designed against the design basis tornado” with “Tornado induced failure of the T/B is conservatively assumed to have an	7

Change ID No.	Section	FSAR Rev. 0 Page	Reason for change	Change Summary	Rev. of FSAR T/R
				effect on the operability of alternate ac power supply system".	
MAP-19-101	19.2.6.1	19.2-1	Consistent with DCD Rev.2	Delete "the PRA, Subsection 19.1, and from" from the second paragraph of Section 19.2.6.1.	7

The CPNPP Units 3 and 4 are near Glen Rose, Texas and are located at 32° 17' latitude and 97° 47' longitude. The tornado hazard curve has been developed based on data reported in NUREG/CR-4461 for the 2° box surrounding the site, which recorded 655 tornado occurrences from 1950 through 2003. The hazard curve produced for the CPNPP Units 3 and 4 is shown in Figure 19.1-201. Strike and exceedance frequencies for tornadoes categorized in enhanced F-scale intensity are shown in Table 19.1-201.

- Plant vulnerabilities

Components significant to the internal events PRA were reviewed to identify component vulnerability during tornadoes. Component failures that could cause initiating events were also reviewed.

All systems and components essential for safe shutdown and for maintaining the integrity of the reactor coolant pressure boundary are located within seismic category I buildings, which are designed to withstand the loading of a design basis tornado. The design basis tornado is described in Subsection 3.3.2 and in Table 19.1-202.

Based on a review of components, the following were identified as potential vulnerabilities during tornadoes with intensities below the design basis tornado.

- Plant switchyard
- Fire suppression water tank and associated piping of the fire suppression system
- CTW for the non-essential chilled water system and associated pipings
- ~~Selector circuit and breakers of the alternative ac power supply system~~ MAP-19-005
- Permanent buses of the non-safety power system
- Main steam system downstream of the main steam isolation valves
- Main feedwater system upstream of the main feedwater isolation valves

Structure, system, and components (SSCs) will be designed using the site-specific basic wind speed of 90 mph or higher. Within this analysis, plant vulnerabilities located outdoors that are not seismic category I or II structures are assumed to be damaged for tornado strikes of intensity enhanced F-scale 1 and greater. In this analysis, the following systems are assumed to be damaged for tornado strikes of intensity enhanced F-scale 1 and greater:

- Plant switchyard

- Fire suppression system
- Non-essential chilled water system

Seismic category II structures are designed to withstand a basic wind speed of 155 mph. The seismic category II structure that contains PRA related equipment is the turbine building (T/B). ~~Tornado induced failure of the T/B has a potential effect on the selector circuit of the non-safety power source, which is located inside the T/B. When this selector circuit is damaged or accessibility to this equipment is prevented, the non-safety gas turbine generators cannot supply power to the safety bus. These non-safety gas turbine generators are located in the power source building, which is a seismic category I structure designed against the design basis tornado.~~Tornado induced failure of the T/B is conservatively assumed to have an effect on the operability of alternate ac power system. In this analysis, the following systems are assumed to be damaged by tornado strikes resulting in failure of the T/B: MAP-19-005

- Plant switchyard
- Fire suppression system
- Non-essential chilled water system
- Non-safety electric power system
- Alternative ac power supply system

Direct damage to the seismic category I structures and the components within the structure can be caused by tornadoes exceeding the design basis tornado. In this analysis safety related systems are assumed to be damaged for tornado strikes of a design basis tornado or greater (wind speed ≥ 230 mph).

- Accident scenario

When a tornado strikes the plant, there is a probability that a tornado initiated accident scenario may be induced with some mitigation functions inoperable due to damage from a tornado strike. Based on plant vulnerabilities identified in the previous section, the internal events PRA was reviewed to identify initiating events or degradation of mitigation functions that may be caused by a tornado strike. The following internal events accident initiators may be caused by a below design basis tornado strike:

- Loss of offsite power (LOOP)
- Main steam line break downstream of main steam isolation valves
- Loss of feedwater flow
- Feedwater line break upstream of the main feedwater isolation valves

from ~~the PRA, Subsection 19.1, and from~~ Subsections 7.2 and 7.3 of the Environmental Report, Part 3 of the Combined License (COL) Application. MAP-19-101

19.2.6.1.1 Background

CP COL 19.3(4) Add the following text after the last paragraphs in D Subsection 19.2.6.1.1.

Design or procedural modifications that could mitigate the consequences of severe accidents are known as severe accident mitigation alternatives (SAMAs). For design certification, SAMAs are known as severe accident mitigation design alternatives (SAMDAs), which focus on design changes and do not consider procedural modifications for SAMAs. For an existing plant with a well-defined design and established procedural controls, the normal evaluation process for identifying potential SAMAs includes four steps:

1. Define the base case -The base case is the dose-risk and cost-risk of severe accidents before implementation of any SAMAs. A plant's PRA is the primary source of data in calculating the base case. The base case risks are converted to a monetary value to use for screening SAMAs.

2. Identify and screen potential SAMAs - Potential SAMAs can be identified from the plant's individual plant examination (IPE), the plant's PRA, and the results of other plants' SAMA analyses. This list of potential SAMAs is assigned a conservatively low implementation cost based on historical costs, similar design changes, and/or engineering judgment, then compared to the base case screening value. SAMAs with higher implementation cost than the base case are not evaluated further.

3. Determine the cost and net value of each SAMA - A detailed engineering cost evaluation is developed using current plant engineering processes for each SAMA remaining after step 2. If the SAMA continues to pass the screening value, step 4 is performed.

4. Determine the benefit associated with each screened SAMA - Each SAMA that passes the screening in step 3 is evaluated using the PRA model to determine the reduction in risk associated with implementation of the proposed SAMA. The reduction in risk benefit is then monetized and compared to the detailed cost estimate. Those SAMAs with reasonable cost-benefit ratios are considered for implementation.

In the absence of a completed plant with established procedural controls, the current analysis is limited to demonstrating that a US-APWR located at the CPNPP site is bounded by the DCD analysis, and determining what magnitude of plant-specific design or procedural modifications would be cost-effective. Determining the magnitude of cost effective design or procedural modifications is the same as step 1, "Define base case," for operating nuclear plants. The base