May 5, 2011

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

Part 10

ITAAC and Proposed License Conditions

Revision1

Update Tracking Report

Revision 2

Revision History

Revision	Date	Update Description
-	11/20/2009	COLA Revision 1 Transmittal See Luminant Letter no. TXNB-09074 Date 11/20/2009
-	10/19/2009	Updated Section: Appendix A.5 See Luminant Letter no. TXNB-09055 Date 10/19/2009 Incorporated responses to following RAIs: No. 50
-	10/26/2009	Updated Section: Appendix A.1 See Luminant Letter no. TXNB-09058 Date 10/26/2009 Incorporated responses to following RAIs: No. 56
-	11/5/2009	Updated Section: 3 See Luminant Letter no. TXNB-09061 Date 11/5/2009 Incorporated responses to following RAIs: No. 71
-	11/13/2009	Updated Section: Appendix A.1, Appendix A.2, Appendix A.3 See Luminant Letter no. TXNB-09065 Date 11/13/2009 Incorporated responses to following RAIs: No. 81, 82, 83
-	11/18/2009	Updated Section: 2, 3, Appendix B.1 See Luminant Letter no. TXNB-09072 Date 11/18/2009 Incorporated responses to following RAIs: No. 70, 78
0	12/8/2009	Updated Sections: Appendix A.1, A.2, A.3, A.4 Incorporated the response to RAI No.83

1	1/8/2010	Updated Section Appendix A.1, A.2
-	2/22/2010	Updated Section: 3 See Luminant Letter no. TXNB-10010 Date 2/22/2010 Incorporated responses to following RAIs: No. 132
-	3/5/2010	Updated Section: 3 See Luminant Letter no. TXNB-10019 Date 3/5/2010 Incorporated responses to following RAIs: No. 70 Supplemental
-	8/9/2010	Updated Section: 2, 3 See Luminant Letter no. TXNB-10056 Date 8/9/2010 Incorporated responses to following RAIs: No. 169
-	9/16/2010	Updated Section: Appendix 1 See Luminant Letter no. TXNB-10064 Date 9/16/2010 Incorporated responses to following RAIs: No. 70 Supplemental
-	10/6/2010	Updated Section: Appendix A.1, A.3 See Luminant Letter no. TXNB-10067 Date 10/6/2010 Incorporated responses to following RAIs: No. 174
-	10/11/2010	Updated Section: Appendix A.3 See Luminant Letter no. TXNB-10072 Date 10/11/2010 Incorporated responses to following RAIs: No. 177
-	4/11/2011	Updated Section: Appendix C See Luminant Letter no. TXNB-11025 Date 4/11/2011 Incorporated responses to following RAIs: No. 211

2	5/5/2011	Updated Section Appendix A.1, A.2, A.3, A.4, A.5, A.6, Appendix B, Appendix C

Tracking Report Revision List

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
RCOL2_ 11.05-2	Appendix A.5	29	Response to RAI No. 50 Luminant Letter no.TXNB-09055 Date 10/19/2009	Newly added Appendix A.5.	-
RCOL2_14.03.03-1	Appendix A.1 Table A1-1 (Sheet 1 of 6)	9	Response to RAI No.56 TXNB-09058 Date 10/26/2009	Revised 2.a and split into two new ITAAC (2.a.i and 2.a.ii)	-
RCOL2_14.03.03-2	Appendix A.1 Table A1-1 (Sheet 2 of 6)	10	Response to RAI No.56 TXNB-09058 Date 10/26/2009	Revised 2.b and split into two new ITAAC (2.b.i and 2.b.ii)	-
RCOL2_14.03.03-3	Appendix A.1 Table A1-1 (Sheet 2, 3 of 6)	10,11	Response to RAI No.56 TXNB-09058 Date 10/26/2009	ITAAC items 3.a and 3.b were revised to state “a report exists”	-
RCOL2_14.03.03-4	Appendix A.1 Table A1-1 (Sheet 4 of 6)	12	Response to RAI No.56 TXNB-09058 Date 10/26/2009	Revised ITAAC item 5.b to include new ITA and AC 5.b.i and 5.b.ii.	-
RCOL2_13.04-1	3	5	Response to RAI No.71 TXNB-09061 Date 11/5/2009	Added the Groundwater Monitoring Program as a Licensing Condition.	-
RCOL2_13.04-2	3	5	Response to RAI No.71 TXNB-09061 Date 11/5/2009	Added the Primary-to-Secondary Leakage Monitoring Program as a License Condition.	-
RCOL2_13.04-3	3	5	Response to RAI No.71 TXNB-09061 Date 11/5/2009	Added the Highly Radioactive Fluid Systems Outside Containment Monitoring Program as a License Condition.	-
RCOL2_13.03-2 RCOL2_13.03-8	2.6	4	Response to RAI No. 78 Luminant Letter no.TXNB-09066 Date 11/12/2009	Added Emergency Planning Action – See RAI# 70	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
RCOL2_14.03.07-1	Appendix A.1 Table A.1-1 (Sheet 1 of 6)	8	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 1.b in Table A.1-1 has been revised to be consistent with the DCD Tier 1 revision	-
RCOL2_14.03.07-3	Appendix A.1 Table A.1-1 (Sheet 3 of 6), Appendix A.2 Table A.2-1 (Sheet 1 of 2)	10, 20	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Revised ITAAC items 5.a. ITAAC item 5.b already revised to reflect answer in	-
RCOL2_14.03.07-4	Appendix A.1, Table A.1-1 (Sheet 5 of 6), Appendix A.2 Table A.2-1 (Sheet 2 of 2)	12, 21	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 6.b in Table A.1-1 and Item 3.b in Table A.2-1 have been revised to be consistent with the similar ITAAC in DCD Tier 1.	-
RCOL2_14.03.07-5	Appendix A.1 Table A.1-1 (Sheet 5 of 6)	12	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 7 in Table A.1-1 has been revised to refer to Table A.1-2	-
RCOL2_14.03.07-6	Appendix A.1 Table A.1-1 (Sheet 6 and of 7) Table A.1-2, Appendix A.2 Table A.2-2	13, 15, 16, 21, 23	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.1-1 ITAAC Items 9.b, 10.b, and Table A2.1 ITAAC Item 5.b have been revised to be consistent with the DCD template for "PSMS Control." Table A.1-2 and Tables A.2-2 have added a PSMS Control column.	-
RCOL2_14.03.07-7	Appendix A.1, Table A.1-1 (Sheet 7 of	14, 17, 21, 22, 23, 24	Response to RAI No.81 Luminant Letter no. TXNB-09065	Table A.1-3 "MCR/RSC Control" entries Table A.2-1, ITAAC Item 6	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
	7) Table A.1-3, Appendix A.2 Table A.2-1 (Sheet 2 of 2) Table A.2-3		on 11/13/2009	Table A.2-1, ITAAC Item 7 Table A.2-2 includes the temperature indicators for the UHS pump houses. Table A.2-3 has been revised to be consistent with DCD Table A.2-3 temperature indicators have been deleted	
RCOL2_14.03.07-8	Appendix A.1 Table A.1-1 (Sheet 7 of 7)	14	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC item 13 has been revised to indicate that the basins are part of the UHS system.	-
RCOL2_14.03.07-9	Appendix A.3 Table A.3-1 (Sheet 2 of 3)	27	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Language corrections	-
RCOL2_14.03.07-10	Appendix A.3 Table A.3-1 (Sheet 1 of 3)	27	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	COLA Part 10, Table A.3-1, ITAAC Items 2.a and 2.b have been revised to address the design bases for protection against internal and external flooding.	-
RCOL2_14.03.07-11	Appendix A.3 Table A.3-1 (Sheet 1 of 3)	27	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.3-1, ITAAC Item 4 has been revised to specify the wall thickness by reference to the thicknesses indicated in Table A.3-2, thereby providing measurable acceptance criteria.	-
RCOL2_14.03.07-12	Appendix A.3 Table A.3-1 (Sheet 2 of 3)	28	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.3-1, ITAAC Items 6, 7, and 8 have been revised Also provides answer to RAI 82-3366, Question No. 14.03.07-19	-
RCOL2_14.03.07-14	Appendix A.1 Table A.1-1	14	Response to RAI No.82 Luminant Letter	ITAAC Item 14 in ITAAC Table A.1-1 has been revised into two ITAACs	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
	(Sheet 7 of 7)		no. TXNB-09065 on 11/13/2009	(14.a and 14.b)	
RCOL2_14.03.07-15	Appendix A.2 Table A.2-1 (Sheet 2 0f 2)	21	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Table A.2-1 ITAAC Item 4 Design Commitment and acceptance criteria has been clarified	-
RCOL2_14.03.07-16	Appendix A.2 Table A.2-1 (Sheet 2 0f 2)	21	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Table A.2-1 ITAAC Item 5.a acceptance criteria have been clarified	-
RCOL2_14.03.07-17	Appendix A.3 Table A.3-1 (Sheet 2 0f 3)	28	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 5.a in Table A.3-1 has been revised to require documentation to demonstrate consistency	-
RCOL2_14.03.07-18	Appendix A.3 Table A.3-1 (Sheet 2 0f 3)	28	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 5.b in Table A.3-1 has been revised to require documentation to demonstrate consistency	-
RCOL2_14.03.07-19	Appendix A.3 Table A.3-1 (Sheet 2 0f 3)	28	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	Appendix A.3, Table A.3-1, ITAAC Item 8 acceptance criteria have been clarified	-
RCOL2_14.03.07-20	Appendix A.3 Table A.3-1 (Sheet 3 0f 3)	29	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	Appendix A.3, Table A.3-1, ITAAC Item 9 Inspections, Tests, Analyses (ITA) has been clarified	-
RCOL2_14.03.07-21	Appendix A.2 Table A.2-2	23	Response to RAI No.83 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.2-2 has been revised to add the UHS ESW pump house supply and exhaust backdraft dampers.	-
RCOL2_14.03.07-22	Appendix A.1 Table A.1-1 (Sheet 4 of 6), Appendix A.2 Table A.2-1	11, 20	Response to RAI No.83 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.1-1 ITAAC Item 6.a, and Table A.2-1 Item 3.a have been revised to be consistent with similar DCD ITAAC	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
	(Sheet 2 of 2)				
RCOL2_14.03.07-27	Appendix A.2 Table A.2-3	24	Response to RAI No.83 Luminant Letter no. TXNB-09065 on 11/13/2009	The temperature switches in the last two columns of Table A.2-3 have been deleted. The revised ITAAC Table A.2-3 also incorporates the recommended changes for RAI 81-3293, Question No. 14.03.07-6.	-
RCOL2_13.03-1	2.6	4	Response to RAI No. 70 Luminant Letter no.TXNB-09072 Date 11/18/2009	Added Section "2.6 Emergency Planning Actions" and revised subsequent section numbers accordingly.	-
RCOL2_13.03-1	3	5	Response to RAI No. 70 Luminant Letter no.TXNB-09072 Date 11/18/2009	Added two proposed licensing conditions to the table in Section 3	-
RCOL2_13.03-15	Appendix B.1	38, 39	Response to RAI No. 78 Luminant Letter no.TXNB-09072 Date 1118/2009	Removed Table B-1 "EP ITAAC Not Required in CPNPP COLA" and associated text in Appendix B.1 Emergency Planning Section. Renamed Table B-2 to B-1.	-
RCOL2_13.03-15	Appendix B.1 Table B-1 (Sheet 1 of 37 through Sheet 37 of 37)	40-77	Response to RAI No. 78 Luminant Letter no. TXNB-09072 Date 11/18/2009	Incorporated elements of RAI response into Table B-1 "Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria"	-
RCOL2_14.03.07-28	Appendix A.1	7	Response to RAI No. 83 Luminant Letter no.TXNB- 09065 Date 11/13/2009	Added Section A.1.1 Design Description.	0

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
RCOL2_14.03.07-28	Appendix A.2	15	Response to RAI No. 83 Luminant Letter no.TXNB- 09065 Date 11/13/2009	Added Section A.2.1 Design Description.	0
RCOL2_14.03.07-28	Appendix A.3	21	Response to RAI No. 83 Luminant Letter no.TXNB- 09065 Date 11/13/2009	Added Section A.3.1 Design Description.	0
RCOL2_14.03.07-28	Appendix A.4	27	Response to RAI No. 83 Luminant Letter no.TXNB- 09065 Date 11/13/2009	Added Section A.4.1 Design Description.	0
MAP-00-201	Appendix A.1 Table A.1-2 Table A.1-3 Appendix A.2 Table A.2-2 Table A.2-3 Figure A.2-1	12, 13, 18, 19, 20	The change of numbering rule of Tag number	Change Tag numbers	1
RCOL2_NONE-3	3	7 and 8	Response to RAI No.132 Luminant Letter No. TXNB-10010 Date 2/22/10	Revised Part 10, ITAAC and Proposed License Conditions to provide additional detail per NRC letter to NEI dated 12/2/09	-
RCOL2_13.03-2	3 Table of "Proposed License Condition"	4	Response to RAI No. 70 Supplemental Luminant Letter no.TXNB-10019 Date 3/05/2010	Added license condition (B) in table to develop site-specific Emergency Action Levels.	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
RCOL2_10.02.03-2	2.3	3	Response to RAI No. 169 Luminant Letter no.TXNB-10056 Date 8/9/2010	Modified the description to make consistent with Section 3.	-
RCOL2_10.02.03-2	3	4 , 7	Response to RAI No. 169 Luminant Letter no.TXNB-10056 Date 8/9/2010	Added “COLA FSAR Subsection 10.2.3.5” to license condition. Added turbine inspection program and the implementation milestone in the table listing Operational Programs.	-
RCOL2_13.03-1 S02	Appendix 1 Emergency Action Levels	A1-i through A1-134	Supplemental Response to RAI No. 70 Luminant Letter no.TXNB-10064 Date 9/16/2010	Replaced the existing Appendix 1 in its entirety with a table identifying differences and deviations between the Comanche Peak Units 3 and 4 EALs and NEI 99-01, Revision 5.	-
RCOL2_14.03.07-29	Appendix A.1 Table A.1-1 (sheet 3 of 6)	13	Response to RAI No. 174 Luminant Letter no.TXNB-10067 Date 10/6/2010	ITAAC 5.b.ii reworded from “a report exists” to new language	-
RCOL2_14.03.07-29	Appendix A.1 Table A.1-1 (sheet 4 of 6)	14	Response to RAI No. 174 Luminant Letter no.TXNB-10067 Date 10/6/2010	ITAAC 7 reworded from “a report exists” to new language	-

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
RCOL2_14.03.07-29	Appendix A.3 Table A.3-1 (sheet 2 of 3)	32	Response to RAI No. 174 Luminant Letter no.TXNB-10067 Date 10/6/2010	ITAAC 5.a, 5.b reworded from “a report exists” to new language	-
RCOL2_14.03.07-32	Appendix A.3 Table A.3-1 (sheet 1 of 3)	31	Response to RAI No. 177 Luminant Letter no.TXNB-10072 Date 10/11/2010	Modified language of ITAAC 2.a and 2.b from “a report exists” to “inspection of.”	-
RCOL2_14.03.12-5	Appendix C Table C-1 (Sheet 2 of 5)	78	Response to RAI No. 211 Luminant Letter No. TXNB-11025 Dated 04/11/2011	Added new physical security ITAAC 3.C.	-
RCOL2_14.03.12-5	Appendix C Table C-1 (Sheet 4 of 5)	80	Response to RAI No. 211 Luminant Letter No. TXNB-11025 Dated 04/11/2011	Added new physical security ITAAC 11.C-2. Revised ITAAC 11.d to 11.c. Revised ITAAC 11.e to 11.d.	-
RCOL2_14.03.12-5	Appendix C Table C-1 (Sheet 5 of 5)	81	Response to RAI No. 211 Luminant Letter No. TXNB-11025 Dated 04/11/2011	Added new physical security ITAAC 16.C-2.	-
CTS-01174	A.1.1 A.1.2 A.2.1 A.2.2 A.3.1 A.3.2 A.4.1 A.4.2	7 [9-12] 15 [24 , 25] 21 [33 , 34, 35] 27 [42, 43]	Consistency with DCD Revision 3 Tier 1	The changes in this section of the design description are: • Text relocated within subsection to align with the sequence and numbering of the corresponding DC in the ITAAC table. • Text edited for consistency between the Design Description (DD) and the Design Commitment (DC) in the ITAAC table. • Deleted redundant text.	2

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
	A.5.1 C.1 C.2	46 47 [86,87, 88]		• Deleted text that is too detailed for COLA Part 10. • Deleted text that is inconsistent with SRP 14.3 guidance. • Editorial changes made for clarification and consistency. • Editorial changes made to correct grammatical error.	
CTS-01174	Table A.1-1 Table A.2-1 Table A.3-1 Table A.4-1 Table A.5-1 Table B-1 Table C-1	8-11 [13-19] 16, 17 [26, 27 28] 22, 23 [36, 37, 38, 39] 28, 29 [44, 45 29 [46] 31 [50 through 85] 48 through 52 [89 through 95]	Consistency with DCD Revision 3 Tier 1	The changes in the ITAAC table are the following: • Consistency between DCD Tier 1 and R-COLA Part 10 • Consistency between design description and acceptance criteria • Consistency between the Inspection, Test, and Analysis and the Acceptance Criteria. • Consistent reference to the Design Description • Consistent use of “a report exists” • Consistent use of “seismic Category I” • Consistent reference to Tables and Figures where applicable • Consistency with Tier 1 interface requirements. • Removed redundant ITAAC • Revised ITAAC to be consistent with latest SRP guidance.	2
CTS-01174	Table A.1-1 ITAAC # 15, 16, 17, 18.	11 [19]	Consistency with DCD Revision 3 Tier 1	Added ITAAC to meet the interface requirements described in DCD Tier 3 Section 3.	2

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
CTS-01208	Table A.1-2 Table A.1-3 Figure A.1-1	12 [20, 21] 13 [22] 14 [23]	Consistency with FSAR Chapter 9	Added isolation valves between the ESWS discharge strainer backwash, UHS basin, and CWS blowdown main header consistent with FSAR.	2
CTS-01208	Table A.2-2	18 [29, 30]	Consistency with FSAR	Revised the fifth column to indicate “Remotely Operated Damper.”	2
CTS-01208	Table A.2-3	19 [31]	Consistency with FSAR	Changed unit heater equipment number consistent with FSAR.	2
CTS-01208	Figure A.2-1	20 [32]	Consistency with FSAR	Figure simplified to be consistent with FSAR.	2
CTS-01208	Table A.3-1 (sheet 2 of 4) #3	22 [37]	Consistency with FSAR	ITAAC was deleted because no penetrations in divisional walls exist.	2
CTS-01208	Table A.3-1 (Sheet 1 and 2 of 4) #2.b, #5.a, #5.b	22, 23 [36, 37]	Consistency with FSAR	ITAAC were deleted because barriers, penetrations, and doors are not credited for safety function	2
CTS-01174	Table A.3-1 (Sheet 3 and 4 of 4) #10	23 [38, 39]	Consistency with DCD Revision 3	Added ITAAC to address seismic fragilities task of the seismic margin analysis.	2
CTS-01208	Table A.3-2 (Sheet 2 of 2)	26 [41]	Consistency with FSAR	Revised concrete thickness to be consistent with FSAR	2
CTS-01208	Table A.5-2	39 [46]	Consistency with DCD Revision 3 and FSAR	Location of radiation monitors was added.	2
CTS-01174	Appendix A.6	[47]	Consistency with DCD Revision 3	Added ITAAC for the fire protection interface identified in the DCD	2

Change ID No.	Section	ITAAC Rev.1 Page *	Reason for change	Change Summary	Rev. of T/R
CTS-01174	Table B-1 (Sheet 6 through 11 of 36) #6, 8	31 [55-60]	Consistency with DCD Revision 3	The ITAAC for EOF and TSC were separated from DCD as site-specific.	2

*Page numbers for the attached marked-up pages may differ from the revision 1 page numbers due to text additions and deletions. When the page numbers for the attached pages do differ, the page number for the attached page is shown in brackets.

PART 10 - APPENDIX A.1

ULTIMATE HEAT SINK SYSTEM (UHSS) AND ESSENTIAL SERVICE WATER SYSTEM (ESWS) (PORTIONS OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

CTS-01174

A.1.1 Design Description

RCOL2_14.0 3.07-28

CTS-01174

The ultimate heat sink system (UHSS) is a safety-related system that (1) removes heat from the essential service water system (ESWS) during normal operation, transients, accidents and design basis events, (2) provides the required cooling for a minimum of 30 days without make-up during all plant operating conditions including normal plant operations, abnormal and accident conditions, (3) provides water to the seismic stand pipe header of the fire protection system to assure manual fire suppression capability following a safe shutdown earthquake.

As shown in Figure A.1-1 and described in Table A.1-2, the major components of the UHSS are four 50 percent capacity mechanical draft cooling towers, one for each ESWS division, and four 33 1/3 percent capacity basins to satisfy the thirty day cooling water supply criteria. In addition, a UHS transfer pump is located in each UHS basin to enable water transfer between UHS basins during accident conditions.

The UHSS is capable of performing required safety functions assuming that one division is out of service for maintenance coincident with the postulated loss of offsite power and any single failure within the UHSS.

The essential service water is cooled by the UHS cooling tower before being returned to the UHS basin. Heat rejection to the environment is effected by direct contact of the hotter essential service water discharging from the ESWS with the UHS cooling tower forced airflow.

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Upon the receipt of an ECCS actuation signal, all UHS cooling tower fans automatically start or continue to operate. Upon the receipt of an ECCS actuation signal or UHS basin low water level signal, the UHS basin blowdown control valves automatically close. 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.

The UHSS can supply at least 18,000 gallons of water to the seismic standpipe system via the ESWS if necessary for manual fire suppression following a safe shutdown earthquake (SSE).

1.a The functional arrangement of the UHSS and ESWS (portions outside the scope of the certified design) is as described in the Design Description of Section A.1.1 and as shown on Figure A.1-1.

1.b Each mechanical division of the UHSS and ESWS (Division A, B, C & D) is physically separated from the other divisions, except for the header portion

	of the transfer line piping, so as not to preclude accomplishment of the safety function.	CTS-01174
2.a.i	The ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design), identified in Table A.1-2, are fabricated, installed and inspected in accordance with ASME Code Section III requirements.	
2.a.ii	The ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design), identified in Table A.1-2, are reconciled with the design requirements.	
2.b.i	The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, is fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	
2.b.ii	The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201, is reconciled with the design requirements.	
3.a	Pressure boundary welds in ASME Code Section III components, identified in Table A.1-2, meet ASME Code Section III requirements for non-destructive examination of welds.	
3.b	Pressure boundary welds in ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, meet ASME Code Section III requirements for non-destructive examination of welds.	
4.a	The ASME Code Section III components, identified in Table A.1-2, retain their pressure boundary integrity at their design pressure.	
4.b	The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, retains its pressure boundary integrity at its design pressure.	
5.a	The seismic Category I equipment, identified in Table A.1-2, is can withstand seismic design basis loads without loss of safety function.	
5.b	The seismic Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201, can withstand seismic design basis loads without a loss of its safety function.	
6.a	The Class 1E components, identified in Table A.1-2, are powered from their respective Class 1E division.	

6.b	Separation is provided between redundant divisions of Class 1E cables, and between Class 1E cables and non-Class 1E cables.	CTS-01174
7.	The UHSS is capable of removing the maximum design heat load transferred from the ESWS during normal plant operations, abnormal and accident conditions of the plant.	
8.	Controls are provided in the MCR to open and close the remotely operated valves identified in Table A.1-2.	
9.a	The remotely operated valves, identified in Table A.1-2 as having an active safey function perform an active safety function to change position as indicated in the table.	
9.b	The remotely operated valves identified in Table A.1-2 as having PSMS control perform an active safety function after receiving a signal from PSMS.	
9.c	After loss of motive power, the remotely operated valves, identified in Table A.1-2, assume the indicated loss of motive power position.	
10.a	Controls are provided in the MCR to start and stop the pumps and fans identified in Table A.1-3.	
10.b	The fans identified in Table A.1-2 as having PSMS control perform as active safety function after receiving a signal from PSMS.	
11.	Alarms and displays identified in Table A.1-3 are provided in the MCR.	
12.a	Alarms, displays and controls identified in Table A.1-3 are provided in the RSC.	
12.b	Controls on the RSC operate the as-built pumps, fans and valves identified in Table A.1-3.	
13.	Each UHS basin has a volume to satisfy the thirty day cooling water supply criteria.	
14.	The UHS transfer and ESW pumps have sufficient NPSH .	
15.	ESW pump operation does not cause vortex formation at minimum allowed UHSS water level.	
16.	Water hammer is prevented in the UHSS.	
17.	The sum of the ESW pump shutoff head and static head is such that the ESWS design pressure is not exceeded.	

18. The UHSS is capable of performing its safety functions under design basis event conditions and coincident single failure with or without offsite power available. CTS-01174

A.1.2 Inspections, Tests, Analysis, and Acceptance Criteria

Table A.1-1 describes ~~the inspections, tests, analyses, and associated acceptance criteria~~ITAAC for the UHSS and ESWS portions outside the scope of the certified design. CTS-01174

Appendix A.1

Table A.1-1 (Sheet 1 of 7)

Ultimate Heat Sink System and Essential Service Water System
(Portions Outside the Scope of the Certified Design)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
1.a The functional arrangement of the ~~system~~UHSS and ESWS (portions outside the scope of the certified design) is as described in the Design Description of Section A.1.1 and as shown on Figure A.1-1.	1.a ~~An i~~Inspection of the as-built UHSS and ESWS (portions outside the scope of the certified design)~~system~~ will be performed.	1.a The as-built UHSS and ESWS (portions outside the scope of the certified design)~~system~~ conform to the functional arrangement as described in the Design Description of Section A.1.1 and as shown on Figure A.11.	CTS-01174
1.b Each mechanical division of the UHSS and ESWS~~system~~ (Division A, B, C & D) is physically separated from the other divisions, except for the header portion of the transfer line piping, so as not to preclude accomplishment of the safety function.	1.b Inspections and analysis of the as-built UHSS and ESWS system will be performed.	1.b A report exists and concludes that each~~Each~~ mechanical division of the as-built UHSS and ESWS~~system~~ (Division A, B, C & D), except for the header portion of the transfer line piping is physically separated from the other divisions of the system ~~by structural and/or fire barriers~~by spatial separation, barriers, or enclosures so as to assure that the functions of the safety related systems are maintained.	RCOL2_14.03.07-1 CTS-01174 RCOL2_14.03.07-1 CTS-01174
2.a.i The ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design), identified in Table A.1-2, are ~~designed and constructed~~fabricated, installed and inspected in accordance with ASME Code Section III requirements.	2.a.i ~~An i~~Inspection of the as-built ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design) identified in Table A.1-2 will be performed~~conducted of the as-built components as documented in ASME design reports~~.	2.a.i The ASME Code Section III ~~design~~data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design) identified in Table A.1-2 are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.~~reconciled with the design documents.~~	RCOL2_14.03.03-1 CTS-01174

Appendix A.1

Table A.1-1 (Sheet 2 of 7)

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
2.a.ii The ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design), identified in Table A.1-2, are reconciled with the design requirements.	2.a.ii A reconciliation analysis of the components identified in Table A.1-2 using as-designed and as-built information and ASME Code Section III design report(s) (NCA-3550) will be performed.	2.a.ii The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that the design reconciliation has been completed in accordance with the ASME Code, for the as-built ASME Code Section III components of the UHSS and ESWS (portions outside the scope of the certified design) identified in Table A.1-2. The report documents the results of the reconciliation analysis.	RCOL2_14.03.03-1 CTS-01174
2.b.i The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, is ~~designed and constructed~~fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	2.b.i ~~An i~~Inspection of the as-built ASME Code piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, including supports, will be performed~~conducted of the as-built piping as documented in ASME design reports~~.	2.b.i The ASME ~~c~~Code Section III ~~design~~data report(s) (certified, when required by ASME Code) and inspection reports (including N-5 Data Reports where applicable) exist and conclude that the as-built ASME Code Section III piping of the as-built ASME Code piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201 is fabricated, installed, and inspected in accordance with ASME Code Section III~~reconciled with the design documents~~.	RCOL2_14.03.03-2 CTS-01174
2.b.ii The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201, is reconciled with the design requirements.	2.b.ii A reconciliation analysis of the piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, including supports, using as-designed and as-built information and ASME Code Section III design report(s) (NCA-3550) will be performed.	2.b.ii The ASME Code Section III design report(s) (certified, when required by ASME Code) exist and conclude that design reconciliation has been completed in accordance with the ASME Code, for the as-built ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201. The report documents the results of the reconciliation analysis.	

Appendix A.1

Table A.1-1 (Sheet 3 of 7)

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Inspections, Tests, Analyses, and Acceptance Criteria

	Design Commitment		Inspections, Tests, Analyses		Acceptance Criteria	
3.a	Pressure boundary welds in ASME Code Section III components, identified in Table A.1-2, meet ASME Code Section III requirements for non-destructive examination of welds.	3.a	Inspections of the as-built pressure boundary welds in ASME Code Section III piping identified in Table A.1-2 will be performed in accordance with the ASME Code Section III.	3.a	The ASME Code Section III code reports exist and conclude that ~~T~~the ASME Code Section III requirements are met for non-destructive examination of the as-built pressure boundary welds in ASME Code Section III piping identified in Table A.1-2.	RCOL2_14.03.03-3 CTS-01174 RCOL2_14.03.03-3 CTS-01174
3.b	Pressure boundary welds in ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, meet~~s~~ ASME Code Section III requirements for non-destructive examination of welds.	3.b	Inspections of the as-built pressure boundary welds in ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design) identified in FSAR Table A.1-2 will be performed in accordance with the ASME Code Section III.	3.b	The ASME Code Section III code reports exist and conclude that ~~T~~the ASME Code Section III requirements are met for non-destructive examination of the as-built pressure boundary welds in ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design) identified in FSAR Table 3.2-201.	RCOL2_14.03.03-3 CTS-01174
4.a	The ASME Code Section III components, identified in Table A.1-2, retain their pressure boundary integrity at their design pressure.	4.a	A hydrostatic test will be performed on the as-built components, identified in Table A.1-2, required by the ASME Code Section III to be hydrostatically tested.	4.a	ASME Code Data Report(s) exist and conclude that ~~T~~the results of the hydrostatic test of the as-built components identified in Table A.1-2 as ASME Code Section III conform to the requirements of the ASME Code Section III.	
4.b	The ASME Code Section III piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, retains its pressure boundary integrity at its design pressure.	4.b	A hydrostatic test will be performed on the as-built piping of the UHSS and ESWS (portions outside the scope of the certified design), identified in FSAR Table 3.2-201, required by the ASME Code Section III to be hydrostatically tested.	4.b	ASME Code Data Report(s) exist and conclude that ~~T~~the results of the hydrostatic test of the as-built piping of the UHSS and ESWS (portions outside the scope of the certified design) identified in FSAR Table 3.2-201 as ASME Code Section III conform to the requirements of the ASME Code Section III.	CTS-01174
5.a	The seismic ~~c~~Category I equipment, identified in Table A.1-2, can withstand seismic design basis loads without loss of safety function.	5.a.i	Inspections will be performed to verify that the as-built seismic ~~c~~Category I ~~as-built~~ equipment identified in Table A.1-2 is ~~installed~~located in ~~the location identified in FSAR Table 3.2-201~~a seismic Category I structure.	5.a.i	The seismic ~~c~~Category I as-built equipment identified in Table A.1-2 is ~~installed~~located in ~~the location identified in FSAR Table 3.2-201~~a seismic Category I structure.	RCOL2_14.03.07-3 CTS-01174

Appendix A.1

Table A.1-1 (Sheet 4 of 7)

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
	5.a.ii Type tests, ~~and/or~~ analyses, or a combination of type tests and analyses of ~~the~~ seismic ~~c~~Category I equipment identified in Table A.1-2 will be performed using analytical assumptions, or will be performed under conditions which bound the seismic design basis requirements.	5.a.ii A report exists and concludes that ~~The results of the type tests and/or analyses conclude that~~ the seismic ~~c~~Category I equipment identified in Table A.1-2 can withstand seismic design basis loads without loss of safety function.	CTS-01174
	5.a.iii Inspections and analyses will be performed to verify that~~on~~ the as-built seismic Category I equipment, identified in Table A.1-2, including anchorages, is seismically bounded by the tested or analyzed conditions.	5.a.iii A report exists and concludes that ~~T~~the as-built seismic Category I equipment identified in Table A.1-2, including anchorages, is seismically bounded by the tested or analyzed conditions.	
5.b ~~Each of t~~The seismic ~~c~~Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201, ~~is designed to~~can withstand ~~combined normal and~~ seismic design basis loads without a loss of its ~~functional capability~~safety function.	5.b.i Inspections will be performed to verify that~~on~~ the as-built seismic Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201 are supported by a seismic Category I structure(s).	5.b.i ~~Each of t~~The as-built seismic ~~c~~Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201 ~~meets the~~are supported by a seismic ~~c~~Category I structure(s)~~requirements~~.	RCOL2_14.03.03-4 CTS-01174
	5.b.ii Inspections and analysis will be performed to verify that the as-built seismic Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports identified in FSAR Table 3.2-201 can withstand seismic design basis loads without a loss of its safety function.	5.b.ii A report exists and concludes that the as-built seismic Category I piping of the UHSS and ESWS (portions outside the scope of the certified design), including supports, identified in FSAR Table 3.2-201 can withstand seismic design basis loads without a loss of its safety function.	RCOL2_14.03.07-29 CTS-01174
6.a The Class 1E components, identified in Table A.1-2, are powered from their respective Class 1E division.	6.a A ~~T~~tests will be performed on each division of the as-built ~~system~~Class 1E equipment identified in Table A.1-2 by providing a simulated test signal only in ~~each~~ the Class 1E division under test.	6.a The simulated test signal exists at the as-built Class 1E equipment identified in Table A.1-2, ~~under test in the as-built system~~	RCOL2_14.03.07-22

Appendix A.1

Table A.1-1 (Sheet 5 of 7)

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
6.b Separation is provided between redundant divisions Class 1E ~~divisions~~cables, and between Class 1E ~~divisions~~cables and non-Class 1E cables.	6.b Inspections of the as-built Class 1E divisional cables ~~and raceways~~ will be ~~conducted~~performed.	6.b ~~The as-built Class 1E electrical cables with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.~~ Physical separation or electrical isolation is provided in accordance with RG 1.75, between the as-built cables of redundant Class 1E divisions and between Class 1E cables and non-Class 1E cables.	RCOL2_14.03.07-4 CTS-01174
7. ~~The system provides adequate heat removal capability transferred design heat load from the ESWS.~~ The UHSS is capable of removing the maximum design heat load transferred from the ESWS during normal plant operations, abnormal and accident conditions of the plant.	7. ~~Tests and analyses of the as-built system will be performed.~~ Tests and analyses will be performed to determine the heat removal capability of the as-built UHSS. The analysis will consider that the maximum ESWS supply water temperature is 95° F under the peak heat load condition.	7. ~~A report exists and concludes that the as-built system provides adequate heat removal capability transferred design heat load~~A report exists and concludes that the as-built UHSS removes the maximum design heat load transferred from the ESWS during normal plant operations, abnormal and accident conditions of the plant while maintaining a UHSS outlet temperature ≤ 95°F.	RCOL2_14.03.07-5 RCOL2_14.03.07-29 CTS-01174
8. Controls ~~exist~~are provided in the MCR to open and close the remotely operated valves identified in Table A.1-2.	8. Tests will be performed on the as-built remotely operated valves ~~listed~~identified in Table A.1-2 using controls in the as-built MCR.	8. Controls in the as-built MCR ~~operate to~~ open and close the as-built remotely operated valves ~~listed~~identified in Table A.1-2.	
9.a The remotely operated valves, identified in Table A.1-2 as having an active safety function ~~to~~ perform an active safety ~~related,~~ function to change position as indicated in the table.	9.a.i Type tests or a combination of type tests and analyses of the remotely operated valves identified in Table A.1-2 as having an active safety function will be performed that demonstrate the capability of the valve to operate under its design conditions.	9.a.i A report exists and concludes that ~~E~~each remotely operated valve identified in Table A.1-2 as having an active safety function changes position as indicated in Table A.1-2 under design conditions.	
	9.a.ii Tests of the as-built valves identified in Table A.1-2 as having an active safety function will be performed under pre-operational ~~flow,~~ differential pressure, ~~and~~ temperature, and flow conditions.	9.a.ii Each as-built remotely operated valve identified in Table A.1-2 as having an active safety function changes position as indicated in Table A.1-2 under pre-operational test conditions.	

Appendix A.1

Table A.1-1 (Sheet 6 of 7)

Ultimate Heat Sink System and Essential Service Water System
(Portions Outside the Scope of the Certified Design)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
9.b The remotely operated valves identified in Table A.1-2 as having PSMS control perform an active safety function after receiving a signal from PSMS.~~Upon the receipt of ECCS actuation signal or UHS basin low water level signal, the blowdown control valve closes automatically.~~	9.b Tests will be performed on the as-built remotely operated valves identified in Table A.1-2 using a simulated test signal.	9.b The as-built remotely operated valves identified in Table A.1-2 as having PSMS control perform the active function identified in the table after receiving a simulated signal.~~Upon the receipt of a simulated test signal, the as-built blowdown control valve closes automatically.~~	RCOL2_14.03.07-6 CTS-01174
9.c After loss of motive power, the remotely operated valves, identified in Table A.1-2, assume the indicated loss of motive power position.	9.c Tests of the as-built valves identified in Table A.1-2 will be performed under the conditions of loss of motive power.	9.c Upon loss of motive power, each as-built remotely operated valve identified in Table A.1 -2 assumes the indicated loss of motive power position.	
10.a Controls ~~exist~~are provided in the MCR to start and stop the pumps and fans identified in Table A.1-3.	10.a Tests will be performed on the as-built pumps and fans identified in Table A.1-3 using controls in the MCR.	10.a Controls in the MCR ~~operate~~ to start and stop the as-built pumps and fans ~~listed~~identified in Table A.1-3.	CTS-01174
10.b The ~~pump and~~ fans identified in Table A.1-2~~3 start after receiving a signal.~~ as having PSMS control perform as active safety function after receiving a signal from PSMS.	10.b Tests will be performed on the as-built fans identified in Table A.1-2 using simulated signal.	10.b The as-built ~~pump and~~ fans identified in Table A.1 -2~~3 start.~~ as having PSMS control perform the active function identified in the table after receiving a simulated signal.	RCOL2_14.03.07-6 CTS-01174
11. Alarms and ~~D~~displays ~~of the parameters~~ identified in Table A.1-3 ~~can be retrieved~~are provided in the MCR.	11. Inspections will be performed for retrievability of the ~~system parameters in~~alarms and displays identified in Table A.1-3 the as-built MCR.	11. ~~The~~Alarms and displays identified in Table A.1-3 can be retrieved in the as-built MCR.	RCOL2_14.03.07-7 CTS-01174
12.a ~~Remote shutdown console (RSC) displays and/or controls provided for the system are identified in Table A.1-3.~~Alarms, displays and controls identified in Table A.1-3 are provided in the RSC.	12.a ~~Inspections will be performed on the as-built RSC displays and/or controls for the system.~~Inspection will be performed for retrievability of the alarms and displays identified in Table A.1-3 in the as-built RSC.	12.a ~~Displays and/or controls exist on the as-built RSC as identified in Table A.1-3.~~Alarms and displays identified in Table A.1-3 can be retrieved in the as-built RSC.	RCOL2_14.03.07-7 RCOL2_14.03.07-30 CTS-01174
	12.b Tests of the as-built RSC control functions identified in Table A.1-3 will be performed.	12.b Controls on the RSC operate to open and close the as-built remotely operated valves and to start and stop the as-built pumps and fans identified in Table A.1-3 with an RSC control function..	RCOL2_14.03.07-30 CTS-01174

Appendix A.1

Table A.1-1 (Sheet 7 of 7)

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
13. Each UHS basin has a volume to satisfy the thirty day cooling water supply criteria.	13. Inspections will be performed to verify the as-built UHS basins include sufficient volume of water.	13. The usable water volume of the each as-built UHS basin is greater than or equal to 3.12×10^6 gallons at the minimum maintained water level.	RCOL2_14.03.07-8 CTS-01174
14. The ~~ultimate heat sink~~UHS transfer and ESW pumps ~~and essential service water pumps~~ have sufficient NPSH.	14. Tests to measure the as-built suction pressure will be performed. Inspections and analysis to determine NPSH available to each ~~pump will be performed.~~UHS transfer and ESW pump will be performed. The analyses will consider vendor test results of required NPSH and the effects of: • Suction from the UHS basin with water level at the minimum allowed value (after 30 days of accident mitigation) • UHSS design temperature range.	14. ~~The as-built system meets the design, and the analysis confirms~~A report exists and concludes that the NPSH available to each UHS transfer and ESW pump is ~~exceeds~~greater than the required NPSH.	RCOL2_14.03.07-14 CTS-01174
15. ESW pump operation does not cause vortex formation at minimum allowed UHSS water level.	15. Test of the as-built ESW pump will be performed.	15. ESW pump operation does not cause vortex formation at minimum allowed UHSS water level.	CTS-01174
16. Water hammer is prevented in the UHSS.	16. Inspection and analysis of the as-built UHSS will be performed.	16. A report exists and concludes that the as-built UHSS is fabricated and installed to prevent water hammer.	
17. The sum of the ESW pump shutoff head and static head is such that the ESWS design pressure is not exceeded.	17. Inspection, test and analysis of the as-built ESWS will be performed.	17. A report exists and concludes that the sum of the as-built ESW pump shutoff head and static head is such that the ESWS design pressure is not exceeded.	
18. The UHSS is capable of performing its safety functions under design basis event conditions and coincident single failure with or without offsite power available.	18. Inspection and analysis of the as-built UHSS will be performed.	18. A report exists and concludes that the as-built UHSS is capable of performing its safety functions under design basis event conditions and coincident single failure with or without offsite power available.	

Appendix A.1

Table A.1-2 (Sheet 1 of 2)
Ultimate Heat Sink System and Essential Service Water System
(Portions Outside the Scope of the Certified Design)
Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/Qual. For Harsh Envir.	Active Safety Function	PSMS Control	Loss of Motive Power Position
Ultimate heat sink transfer pumps	UHS-~~O~~MPP-001 A, B, C, D	3	Yes	-	Yes/No	Start Stop	Remote Manual	-
Ultimate heat sink cooling tower fans	UHS-~~OEQ~~MFN-001 A, B, C, D, 002 A, B, C, D	-	Yes	-	Yes/No	Start Stop	ECCS Actuation; LOOP Sequence; Remote Manual	-
Ultimate heat sink transfer pump discharge valves	UHS-MOV-503 A, B, C, D	3	Yes	Yes	Yes/No	Transfer Closed Transfer Open	Remote Manual	As is
Ultimate heat sink transfer line basin inlet valves	UHS-MOV-506 A, B, C, D	3	Yes	Yes	Yes/No	Transfer Closed Transfer Open	Remote Manual	As is
Ultimate heat sink basin blowdown control valves	~~ESW~~EWS-HCV-~~2000,2001, 2002,2003~~010, 011, 012, 013	3	Yes	Yes	Yes/No	Transfer Closed	ECCS actuation, LOOP, Pump stop, UHS basin low water level, Remote manual	Closed
ESWP Discharge Strainer Backwash Isolation Valve to CWS blowdown main header	EWS-AOV-576A, B, C, D	3	Yes	Yes	Yes/No	Transfer Closed	ECCS actuation, LOOP, Pump stop, UHS basin low water level, Remote manual	Closed

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Appendix A.1

Table A.1-2 (Sheet 2 of 2)
Ultimate Heat Sink System and Essential Service Water System
(Portions Outside the Scope of the Certified Design)
Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated Valve	Class 1E/Qual. For Harsh Envir.	Active Safety Function	PSMS Control	Loss of Motive Power Position
ESWS Blowdown Main Header Isolation Valve to CWS blowdown main header	EWS-AOV-577	3	Yes	Yes	Yes/No	Transfer Closed	ECCS actuation, LOOP, Pump stop, UHS basin low water level, Remote manual	Closed
Ultimate heat sink basin water level	UHS-LT-~~2070~~010A,B,~~2071~~011A,B,~~2072~~012A,B,~~2073~~013A,B	-	Yes	-	Yes/ No	-	-	-
Ultimate heat sink basin temperature	UHS-TE-~~2070,2071,2072,2073~~010, 011, 012, 013	-	Yes	-	Yes/ No	-	-	-

NOTE:

Dash (-) indicates not applicable.

RCOL2_14.03.07-6

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Table A.1-3

Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Equipment Alarms, Displays, and Control Functions

Equipment/Instrument Name	MCR/RSC Alarm	MCR/RSC Display	MCR/RSC Control Function	~~RSC Display~~
Ultimate heat sink transfer pumps UHS-~~O~~MPP-001A, B, C, D	No	Yes	Yes	~~Yes~~
Ultimate heat sink cooling tower fans UHS-~~OEQ~~MFN-001A, B, C, D, 002A, B, C, D	No	Yes	Yes	~~Yes~~
Ultimate heat sink transfer pump discharge valves UHS-MOV-503A, B, C, D	No	Yes	Yes	~~Yes~~
Ultimate heat sink transfer line basin inlet valves UHS-MOV-506A, B, C, D	No	Yes	Yes	~~Yes~~
Ultimate heat sink basin blowdown control valves ESW-HCV-~~2000, 2001, 2002, 2003~~010, 011, 012, 013	No	Yes	Yes	~~Yes~~
Ultimate heat sink basin water level UHS-LT-~~2070~~010A, B, ~~2071~~ 011A, B, ~~2072~~012A, B, ~~2073~~013A, B	Yes	Yes	~~Yes~~No	~~Yes~~
Essential Service Water basin water temperature UHS-TE-~~2070, 2071, 2072, 2073~~010, 011, 012, 013	Yes	Yes	~~Yes~~No	~~Yes~~
ESWP Discharge Strainer Backwash Isolation Valve to CWS blowdown main header EWS-AOV-576A, B, C, D	No	Yes	Yes	
ESWS Blowdown Main Header Isolation Valve to CWS blowdown main header EWS-AOV-577	No	Yes	Yes	

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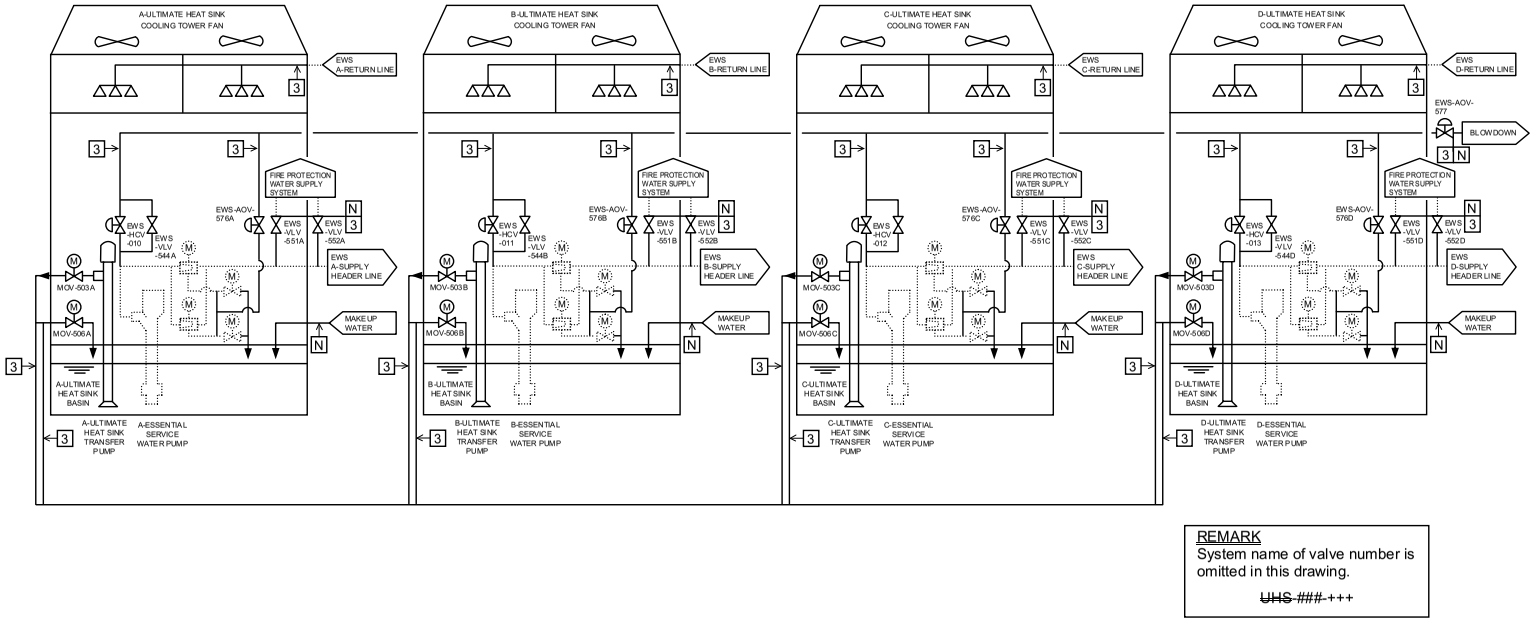
Appendix A.1

Figure A.1-1 Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design)

CTS-01208



PART 10 - APPENDIX A.2

UHS ESW PUMP HOUSE VENTILATION SYSTEM

RCOL2_14.0 3.07-28
CTS-01174

A.2.1 Design Description

The UHS ESW pump house ventilation system provides and maintains area design temperature limits in the UHS ESW pump houses during all plant operating, abnormal and accident conditions.

The UHS ESW pump house ventilation system is located within the UHS related structure.

There are four separate and independent UHS ESW pump houses and each has its own ventilation system.

1.a The functional arrangement of the UHS ESW pump house ventilation system is as described in the Design Description of Section A.2.1 and as shown in Figure A.2-1

1.b Each mechanical division of the UHS ESW pump house ventilation system (Division A, B, C & D) is physically separated from the other divisions so as not to preclude accomplishment of the safety function.

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

3.a Class 1E equipment identified in Table A.2-2 is powered from its respective Class 1E division.

3.b. Separation is provided between redundant divisions of UHS ESW pump house ventilation system Class 1E cables, and between Class 1E cables and non-Class 1E cable.

4. The UHS ESW pump house ventilation system provides ventilation air to maintain area temperature within design limits in the UHS ESW pump houses during normal operations, abnormal and accident conditions of the plant.

5.a. Controls are provided in the MCR to start and stop the UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-3.

5.b. The UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-2 as having PSMS control, perform as active safety function after receiving a signal from PSMS.

6. Displays of the parameters identified in Table A.2-3 are provided in the MCR.

7. Displays and controls identified in Table A.2-3 are provided in the RSC. CTS-01174

A.2.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table A.2-1 specifies the ~~inspections, tests, analyses, and associated acceptance criteria~~ITAAC for the UHS ESW pump house ventilation system. CTS-01174

Appendix A.2

Table A.2-1 (Sheet 1 of 3)
UHS ESW Pump House Ventilation System
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
1.a The functional arrangement of the UHS ESW pump house ventilation system is as described in the Design Description of Section A.2.1 and as shown ~~on~~in Figure A.2-1	1.a ~~An i~~Inspection of the as-built UHS ESW pump house ventilation system will be performed.	1.a The as-built the UHS ESW pump house ventilation system conforms ~~with~~to the functional arrangement as described in the Design Description of Section A.2.1 and as shown ~~on~~in Figure A.2-1.	CTS-01174
1.b Each mechanical division of the UHS ESW pump house ventilation system (Division A, B, C & D) is physically separated from the other divisions so as not to preclude accomplishment of the safety function.	1.b Inspection~~s~~ and analysis of the as-built ~~UHE~~UHS ESW pump house ventilation system will be performed.	1.b ~~Each~~A report exists and concludes that each mechanical division of the as-built UHS ESW pump house ventilation system is physically separated from other mechanical divisions ~~by structural and/or fire barriers~~by spatial separation, barriers, or enclosures so as to assure that the functions of the safety related systems are maintained.	CTS-01174
2. The seismic ~~c~~Category I equipment, identified in Table A.2-2, ~~is designed to~~can withstand seismic design basis loads without loss of safety function.	2.a Inspections will be performed to verify that the ~~as-built~~ seismic ~~c~~Category I as-built equipment identified in Table A.2-2 is located in ~~the UHS related~~a seismic Category I structure.	2.a The ~~as-built~~ seismic ~~c~~Category I as-built equipment identified in Table A.2-2 is located in ~~the UHS related~~a seismic Category I structure.	RCOL2_14.03.07-3 CTS-01174
	2.b Type tests, ~~and/or~~ analyses, or a combination of type tests and analyses of the seismic ~~c~~Category I equipment identified in Table A.2-2 will be performed using analytical assumptions, or will be performed under conditions, which bound the seismic design basis requirements.	2.b ~~The result of the type tests and/or analyses~~A report exists and concludes that the seismic ~~c~~Category I equipment identified in Table A.2-2 can withstand seismic design basis loads without loss of safety function.	
	2.c Inspection and analyses will be performed to verify that ~~on~~ the as-built equipment identified in Table A.2-2, including anchorages, is seismically bounded by the tested or analyzed conditions.	2.c ~~The~~A report exists and concludes that the as-built seismic Category Iequipment identified in Table A.2-2, including anchorages, is seismically bounded by the tested or analyzed conditions.	

Appendix A.2

Table A.2-1 (Sheet 2 of 3)
UHS ESW Pump House Ventilation System
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
3.a ~~The~~ Class 1E ~~components~~equipment~~,~~ identified in Table A.2-2~~,~~ ~~are~~is powered from ~~their~~its respective Class 1E division.	3.a A test will be performed on each division of the as-built Class 1E equipment identified in Table A.2-2~~UHS ESW pump house ventilation system~~ by providing a simulated test signal only in ~~each~~the Class 1E division under test.	3.a The simulated test signal exists ~~only~~ at the as-built Class 1E equipment identified in Table A.2 -2 under test ~~in the as-built UHS ESW pump house ventilation system~~.	RCOL2_14.03.07-22 CTS-01174
3.b. Separation is provided between redundant divisions of UHS ESW pump house ventilation system Class 1E ~~divisions~~cables, and between Class 1E ~~divisions~~cables and non-Class 1E cable.	3.b Inspections of the as-built Class 1E divisional cables ~~and raceways~~ will be performed.	3.b ~~The as-built Class 1E electrical cables with only one division are routed in raceways assigned to the same division. There are no other safety division electrical cables in a raceway assigned to a different division.~~Physical separation or electrical isolation is provided in accordance with RG 1.75 between the redundant divisions of the as-built UHS ESW pump house ventilation system Class 1E cables and between Class 1E cables and non-Class 1E cables.	RCOL2_14.03.07-4 CTS-01174
4. The UHS ESW pump house ventilation system provides ventilation air to maintain area temperature within design limits~~provides and maintains the proper environmental conditions within~~ in the ~~respective room~~UHS ESW pump houses during normal operations, abnormal and accident conditions of the plant.	4. Tests and analyses of the as-built UHS ESW pump house ventilation system will be performed for all four divisions.	4. ~~The~~A report exists and concludes that the as-built UHS ESW pump house ventilation system ~~provides and maintains the proper environmental conditions~~is capable of ~~within~~providing ventilation air to maintain area temperature within design limits in the ~~respective room by the exhaust fan and/or unit heater operation~~UHS ESW pump houses during normal operations, abnormal and accident conditions of the plant with outside ambient design temperature condition (i.e. -5°F - 115 °F).	RCOL2_14.03.07-1 CTS-01174 RCOL2_14.03.07-15 CTS-01174 RCOL2_09.04.05-15
5.a. Controls ~~exist~~are provided in the MCR to start and stop the UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-3.	5.a. Tests will be performed on the as-built exhaust fans and unit heaters identified in Table A.2-3 using controls in the as-built MCR.	5.a Controls exist in the as-built MCR ~~operate~~ to start and stop the as-built UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-3.	RCOL2_14.03.07-16

Appendix A.2

Table A.2-1 (Sheet 3 of 3)
UHS ESW Pump House Ventilation System
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
5.b. The UHS ESW pump house ventilation system exhaust fans and unit heaters ~~units~~ identified in Table A.2-2~~3~~ as having PSMS control, perform as active safety function~~start~~ after receiving a signal from PSMS.	5.b. Tests will be performed on ~~of~~ the as-built UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-2 as having PSMS~~will be performed~~ using ~~real or~~ simulated signals.	5.b. The as-built UHS ESW pump house ventilation system exhaust fans and unit heaters identified in Table A.2-2~~3~~ as having PSMS control, perform an active safety function identified in the table ~~start~~ after receiving a simulated signal.	CTS-01174 RCOL2_14.03.07-6 CTS-01174
6. Displays of the ~~UHS ESW pump house ventilation system~~ parameters identified in Table A.2-3 ~~can be retrieved~~are provided in the MCR.	6. Inspections will be performed for retrievability of ~~the as-built UHS ESW pump house ventilation system parameters~~displays identified in Table A.2-3 in the as-built MCR.	6. ~~The d~~Displays identified in Table A.2-3 can be retrieved in the as-built MCR.	RCOL2_14.03.07-7 CTS-01174
7. ~~Remote shutdown console (RSC) displays and/or controls provided for the UHS ESW pump house ventilation system are identified in Table A.2-3.~~Displays and controls identified in Table A.2-3 are provided in the RSC.	7.a ~~Inspections will be performed on the as-built RSC displays and/or controls for the as-built UHS ESW pump house ventilation system.~~Inspections will be performed for retrievability of the displays identified in Table A.2-3 in the as-built RSC.	7.a ~~The displays and/or controls exist on the as-built RSC as identified in Table A.2-3.~~Displays identified in Table A.2-3 can be retrieved in the as-built RSC.	RCOL2_14.03.07-30 CTS-01174
	7.b Tests of the as-built RSC control functions identified in Table A.2-3 will be performed.	7.b Controls in the as-built RSC operate the as-built equipment identified in Table A.2-3 with an RSC control function.	

Table A.2-2 (Sheet 1 of 2)
UHS ESW Pump House Ventilation System Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated ~~Valve~~ Damper	Class 1E/ Qual. For Harsh Envir.	PSMS Control	Active Safety Function	Loss of Motive Power Position
ESW Pump Room Exhaust Fan	VRS-~~O~~MFN-601A,B,C,D	-	Yes	-	Yes/No	High Temperature	Start	-
UHS Transfer Pump Room Exhaust Fan	VRS-~~O~~MFN-602A,B,C,D	-	Yes	-	Yes/No	High Temperature	Start	-
ESW Pump Room Unit Heater	VRS-~~OEQ~~MEH-601A,B,C,D, VRS-~~OEQ~~MEH-602A,B,C,D	-	Yes	-	Yes/No	Low Temperature	Start	-
UHS Transfer Pump Room Unit Heater	VRS-~~OEQ~~MEH-603A,B,C,D	-	Yes	-	Yes/No	Low Temperature	Start	-
ESW Pump Room Temperature switch	VRS-TS-803,804,805,806 VRS-TS-823,824,825,826 VRS-TS-843,844,845,846 VRS-TS-863,864,865,866	-	Yes	-	Yes/No	-	-	-
UHS Transfer Pump Room Temperature switch	VRS-TS-812,813,814,815 VRS-TS-832,833,834,835 VRS-TS-852,853,854,855 VRS-TS-872,873,874,875	-	Yes	-	Yes/No	-	-	-
ESW Pump Room Air Intake Gravity Type Backdraft Damper	VRS-BDD-601 A,B,C,D	-	Yes	-	No/No	-	(1)	-
ESW Pump Room Air Dis-charge Gravity Type Backdraft Damper	VRS-BDD-602 A,B,C,D	-	Yes	-	No/No	-	(1)	-

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MAP-00-201

RCOL2_14 .03.07-7 RCOL2_09.0 4.05-14

RCOL2_14 .03.07-21

RCOL2_09.0 4.05-14

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Table A.2-2 (Sheet 2 of 2)
UHS ESW Pump House Ventilation System Equipment Characteristics

Equipment Name	Tag No.	ASME Code Section III Class	Seismic Category I	Remotely Operated ~~Valve~~ Damper	Class 1E/ Qual. For Harsh Envir.	PSMS Control	Active Safety Function	Loss of Motive Power Position
UHS Transfer Pump Room Air Intake Gravity Type Backdraft Damper	VRS-BDD-603 A,B,C,D	-	Yes	-	No/No	-	(1)	-
UHS Transfer Pump Air Discharge Gravity Type Backdraft Dampers	VRS-BDD-604 A,B,C,D	-	Yes	-	No/No	-	(1)	-

(1) The backdraft dampers are passive components that have the safety functions to open in the direction of airflow and close by counterbalance when no air flow is present.

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Table A.2-3
UHS ESW Pump House Ventilation System Equipment
Alarms, Displays, and Control Functions

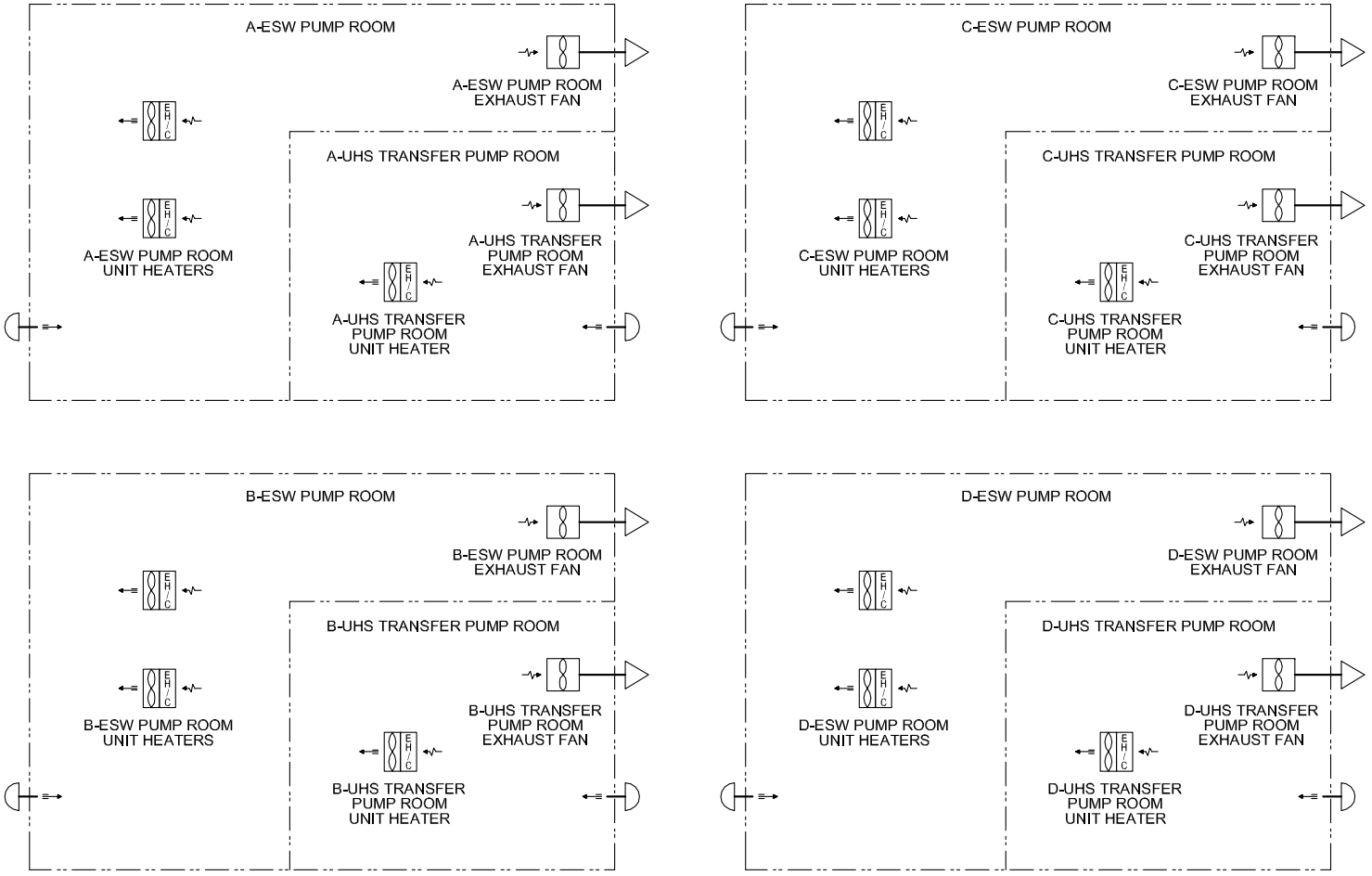
Equipment/Instrument Name	MCR/RSC Alarm	MCR/RSC Display	MCR/RSC Control Function	~~RSC Display~~	
ESW Pump Room Exhaust Fan (VRS-~~O~~MFN-601A,B,C,D)	No	Yes	Yes	~~Yes~~	MAP-00-201
UHS Transfer Pump Room Exhaust Fan (VRS-~~O~~MFN-602A,B,C,D)	No	Yes	Yes	~~Yes~~	
ESW Pump Room Unit Heater (VRS-~~OEQ~~MEH-601A,B,C,D, VRS-~~OEQ~~MEH-602A,B,C,D)	No	Yes	Yes	~~Yes~~	CTS-01208
UHS Transfer Pump Room Unit Heater (VRS-~~OEQ~~MEH-603A,B,C,D)	No	Yes	Yes	~~Yes~~	
~~ESW Pump Room Temperature (VRS-TS-2610C,D,E,F, VRS-TS-2620C,D,E,F, VRS-TS-2630C,D,E,F, VRS-TS-2640C,D,E,F)~~	~~Yes~~	~~No~~	~~Yes~~	~~No~~	RCOL2_14.03.07-27
~~UHS Transfer Pump Room Temperature (VRS-TS-2615C,D,E,F, VRS-TS-2625C,D,E,F, VRS-TS-2635C,D,E,F, VRS-TS-2645C,D,E,F)~~	~~Yes~~	~~No~~	~~Yes~~	~~No~~	

RCOL2_14.03.07-7

Appendix A.2

Figure A.2-1 UHS ESW Pump House Ventilation System

MAP-00-201
CTS-01208



PART 10 - APPENDIX A.3

PLANT-SPECIFIC STRUCTURES

A.3.1 Design Description

RCOL2_14.03.07-28

CTS-01174

The site-specific structures are comprised of the UHS related structures (UHSRS), ESW pipe tunnel (ESWPT) and power source fuel storage vault (PSFSV), which are seismic Category I structures. The seismic Category I structures are designed and constructed to withstand design-basis loads without loss of structural integrity. Design basis loads are:

- Normal plant operation (including dead loads, live loads, lateral earth pressure loads, equipment loads, hydrodynamic loads temperature and equipment vibration)
- External events (including rain, snow, flood, tornado, tornado generated missiles and safe shutdown earthquake)
- Internal events (including flood, pipe rupture, equipment failure, and equipment failure generated missiles).

A.3.1.1 UHSRS

The UHSRS consists of an UHS cooling tower enclosure, UHS ESW pump houses, and an UHS basin. These structures are described below.

UHS cooling tower enclosures - Each UHS basin has one cooling tower with two cells. Each cell is enclosed by reinforced concrete structures that house the equipment required to cool the water used by the ESWS. The reinforced concrete wall separates the two cell enclosures. A reinforced concrete wall, running eastwest, separates the cell enclosure portion of the basin from the rest of the UHS basin. Air intakes serving the cooling towers are configured to protect the safety-related substructures and components from tornado missiles.

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UHS ESW pump house - The pump house is an integral part of the UHS basin supported by UHS basin exterior and interior walls. Each pump house contains one ESW pump and one UHS transfer pump with associated auxiliaries. The pump bay (lowest portion of the pump house required for the pump suction) is deeper than the rest of the UHS basin. A reinforced concrete wall divides the pump house basin from the rest of the UHS basin and is configured to prevent postulated direct or deflected design basis tornado missiles from impacting safety related components located within the structure. There is a fire barrier between the UHS transfer pump and the UHS ESW pump of each UHS ESW pump house.

UHS Basin - There are four basins for each unit and each basin has one cooling tower with two cells. Each basin is constructed of reinforced concrete and serves as a reservoir for the ESWS. Two basins share a common foundation mat and a reinforced concrete wall divides them. CTS-01174

A.3.1.2 ESWPT

The ESWPT is a reinforced concrete structure that runs from beneath the T/B to the UHSRS. The ESWPT is divided into two sections by a concrete wall. Each section contains both ESWS supply and return lines. The ESWPT structure is isolated from other structures to prevent seismic structural interaction.

A.3.1.3 PSFSV

RCOL2_14.03.07-28

The PSFSVs are reinforced concrete structures, which house the safety-related and non safety-related fuel oil tanks for the emergency power generators. There is one vault for each PS/B founded on separate reinforced concrete basemats. The vault contains three oil tanks, two safety-related and one non safety-related. Each tank is contained in a separate compartment separated by reinforced concrete walls. The top of the roof slab is at the finished plant grade elevation, with a concrete curb. The curb is provided to prevent vehicular traffic on the roof. CTS-01174

1. The structural configurations of the UHSRS, ESWPT and PSFSV are as described in the Design Description of Section A.3, in Table A.3-2, and as shown in FSAR Figures 3.8-201 through 3.8-214.

2.a Divisional flood barriers are provided in the UHSRS, ESWPT and PSFSV to protect against internal flooding.

2.b Deleted

3. Deleted

4. For the UHSRS, ESWPT and PSFSV, external walls below flood level are as indicated in Table A.3-2 to protect against water seepage.

5.a Deleted

5.b Deleted

6. Penetrations in the external walls of the UHSRS, ESWPT and PSFSV that are at or below design basis flood level are fitted with wate-tight seals to protect against external flooding.

7. Redundant safe shutdown components and associated electrical divisions of the UHSRS, ESWPT and PSFSV are separated by 3-hour rated fire

barriers to preserve the capability to safely shutdown the plant following a fire. CTS-01174

8. Penetrations and openings through the fire barriers of the UHSRS, ESWPT and PSFSV are protected against fire.

9. The UHRS, ESWPT and PSFSV can withstand design-basis loads.

10. SSCs that require evaluation in the seismic fragilities task of a seismic margin analysis have high confidence of low probability of failure (HCLPF) values equal to or greater than the review level earthquake.

A.3.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table A.3-1 describes the ~~inspections, tests analyses, and associated acceptance criteria~~ITAAC for the ~~ultimate heat sink~~UHS related structure (UHSRS), ~~essential service water~~ESW pipe tunnel (ESWPT), and power source fuel storage vault (PSFSV). CTS-01174

Appendix A.3

Table A.3-1 (Sheet 1 of 4)
UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
1. The structural configurations of the UHSRS, ESWPT and PSFSV are as described in the Design Description of Section A.3, in Table A.3-2, and as shown in FSAR Figures 3.8-201 through 3.8-214 ~~and Table A.3-2~~.	1. Inspections will be performed to verify that ~~of~~ the as-built ~~structural configurations of the~~ UHSRS, ESWPT and PSFSV ~~will be performed~~conform to the structural configurations as described in the Design Description of Section A.3, Table A.3-2, and as shown in Figures 3.8-201 through 3.8-214 .	1. The as-built ~~design configurations of the~~ UHSRS, ESWPT and PSFSV conform to the structural configurations as described in Table A.3-2 and as shown in ~~are reconciled with descriptions in~~ FSAR Figures 3.8-201 through 3.8-214 ~~and Table A.3-2~~ with the following construction tolerances.. 1) Thickness of exterior walls below plant grade: +12 inches/- 1inch 2) Thickness of exterior walls above plant grade, and interior walls: +1/-1 inch 3) Thickness of floors: +1/-1 inch 4) Floor level: +1/-1 inch.	RCOL2_14.03.07-9 CTS-01174
2.a Divisional flood barriers are provided in the UHSRS, ESWPT and PSFSV to protect against ~~the~~ internal ~~and external~~ flooding.	2.a.i~~An inspection will be performed to verify that the as-built divisional flood barriers exist in the UHSRS, ESWPT and PSFSV.~~An analysis will be performed to verify the as-built divisional flood barriers of the UHSRS, ESWPT and PSFSV are designed to protect against internal flooding	2.a.i A report exists and concludes that ~~T~~the as-built divisional flood barriers ~~exist at the appropriate locations~~ in the UHSRS, ESWPT and PSFSV ~~against the internal and external flooding~~are designed to protect against internal flooding.	RCOL2_14.03.07-10 RCOL2_14.03.07-32 CTS-01174
	2.a.iiAn inspection will be performed to verify that the as-built divisional flood barriers are provided in the UHSRS, EWSPT and PSFSV to protect against internal flooding.	2.a.iiAs-built divisional flood barriers in the UHSRS, ESWPT and PSFSV are provided to protect against internal flooding.	
2.b ~~Water tight doors are provided in the UHSRS, ESWPT and PSFSV to protect against the internal and external flooding.~~Deleted	2.b ~~An inspection of the as-built water tight doors will be performed.~~Deleted	2.b ~~The as-built water tight doors exist at the appropriate locations in the UHSRS, ESWPT and PSFSV against the internal and external flooding.~~Deleted	RCOL2_14.03.07-10 CTS-01208

Appendix A.3

Table A.3-1 (Sheet 2 of 4)
UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
3. ~~Penetrations in the divisional walls of the UHSRS, ESWPT and PSFSV, except for water-tight doors, are provided appropriately against the internal and external flooding.~~Deleted	3. ~~An inspection of the as-built penetrations will be performed.~~Deleted	3. ~~The as-built penetrations in the divisional walls of the UHSRS, ESWPT and PSFSV are installed at an acceptable level above the floor, and are sealed up to the internal and external flooding levels.~~Deleted	RCOL2_14.0 3.07-11 CTS-01208
4. For the UHSRS, ESWPT and PSFSV, external walls ~~thickness~~below flood level are as indicated in Table A.3-2 ~~below flood level is provided~~ to protect against water seepage.	4. An inspection will performed ~~of~~to verify that the as-built external walls below flood level ~~thickness~~ for the UHSRS, ESWPT and PSFSV ~~will be performed~~are as indicated in Table A.3-2.	4. For the UHSRS, ESWPT and PSFSV, the as-built external wall~~s~~ below flood level are as indicated in Table A.3-2 ~~below flood level are provided with adequate thickness~~ to protect against water seepage.	RCOL2_14.0 3.07-11 CTS-01174
5.a ~~Flood barriers of the UHSRS, ESWPT and PSFSV are installed up to the finished plant grade level to protect against water seepage.~~Deleted	5.a ~~An inspection of the as-built flood barriers will be performed.~~Deleted	5.a ~~he as-built flood barriers are installed up to the finished plant grade level for the UHSRS, ESWPT and PSFSV to protect against water seepage.~~Deleted	RCOL2_14.0 3.07-17 RCOL2_14.0 3.07-29 CTS-01208
5.b ~~Flood doors and flood barriers penetrations of the UHSRS, ESWPT and PSFSV are provided with flood protection features.~~Deleted	5.b ~~Inspections of the as-built flood doors and flood penetrations will be performed.~~Deleted	5.b ~~For the UHSRS, ESWPT and PSFSV, the as-built flood doors and flood barrier penetrations are provided with flood protection features to protect against water seepage.~~Deleted	RCOL2_14.0 3.07-29 RCOL2_14.0 3.07-18 CTS-01208
6. Penetrations in the external walls~~, including those up to the subgrade level if necessary,~~ of the UHSRS, ESWPT and PSFSV that are at or below design basis flood level are fitted with water-tight seals to protect against external flooding~~provided with flood protection features below flood level~~.	6. An inspection will be performed to verify that ~~the flood protection features of the~~ as-built penetrations in the external walls of the UHSRS, ESWPT and PSFSV ~~exist below flood level~~that are at or below design basis flood level are fitted with water-tight seals.	6. The as-built penetrations in the external walls of the UHSRS, ESWPT and PSFSV that are at or below design basis flood level are fitted with water-tight seals to protect against external flooding ~~of the UHSRS, ESWPT and PSFSV are provided with flood protection features below flood level.~~	RCOL2_14.0 3.07-12 CTS-01174

Appendix A.3

Table A.3-1 (Sheet 3 of 4)
UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
7. Redundant safe shutdown components and associated electrical divisions of the UHSRS, ESWPT and PSFSV are separated by 3-hour rated fire barriers to preserve the capability to safely shutdown the plant following a fire. ~~The 3-hour rated fire barriers are placed as required by the FHA.~~	7. An inspection will be performed to verify that ~~of~~ the as-built 3-hour rated fire barriers ~~will be performed~~are placed as required by the FHA.	7. Redundant safe shutdown components and associated electrical divisions of each as-built UHSRS, ESWPT and PSFSV are separated by 3-hour rated fire barriers to preserve the capability to safely shutdown the plant following a fire. The 3-hour rated as-built fire barriers are placed as required by the FHA.	CTS-01174
8. ~~All p~~Penetrations and openings through ~~the~~ fire barriers of the UHSRS, ESWPT and PSFSV are protected against fire.	8. An inspection will be performed to verify that the as-built ~~components are provided to protect the~~ penetrations and openings through fire barriers identified in the FHA are sealed or can be closed with fire rated components consistent with the fire resistance rating of the associated barrier.	8. ~~All a~~As-built penetrations and openings through fire barriers identified in the FHA of the UHSRS, ESWPT and the PSFSV are protected against fire with 3-hour fire rated components (~~i.e~~e.g. fire doors in door openings~~, fire dampers in ventilation duct openings,~~ and penetration seals) consistent with the fire resistance rating of the associated barrier.	RCOL2_14.03.07-19 CTS-01174 RCOL2_14.03.07-19
9. The UHRS, ESWPT and PSFSV ~~are designed based on the structural~~can withstand design-basis loads.	9.i An analysis will be performed to reconcile each as-built UHSRS with the design basis loads. ~~An analysis will be performed to verify that the as-built UHRS, ESWPT and PSFSV, other than the PCCV, structural design basis loads are reconciled.~~	9.i ~~Design r~~Reports exist and conclude that ~~for the~~each as-built UHSRS~~, ESWPT and PSFSV are designed in accordance with structural~~can withstand design-basis loads.	RCOL2_14.03.07-20 CTS-01174
	9.ii An analysis will be performed to reconcile each as-built ESWPT with the design basis loads.	9.ii Reports exist and conclude that each as-built ESWPT can withstand design-basis loads.	
	9.iii An analysis will be performed to reconcile each as-built PSFSV with the design basis loads.	9.iii Reports exist and conclude that each as-built PSFSV can withstand design-basis loads.	
10. SSCs that require evaluation in the seismic fragilities task of a seismic margin analysis have high confidence of low probability of failure (HCLPF) values equal to or greater than the review level earthquake.	10.a Analyses will be performed to verify that the SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment have HCLPF values equal to or greater than the review level earthquake.	10.a Reports exist and conclude that the SSCs evaluated in the seismic fragilities task of the seismic margin assessment have HCLPF values equal to or greater than the review level earthquake.	

Appendix A.3

Table A.3-1 (Sheet 4 of 4)
UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
	10.b Inspection and analysis will be performed to verify that as-built SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment are bounded by conditions used in the seismic margin assessment.	10.b A report exists and concludes that the as-built SSCs requiring evaluation in the seismic fragilities task of a seismic margin assessment are bounded by the conditions used in the seismic margin assessment.

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Appendix A.3

Table A.3-2 (Sheet 2 of 2)
Definition of Wall Thicknesses for Safety-Related Structures: ESWPT

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable
Mat Slab	-	793.08’	2’-0”	No
Exterior Wall (North)	-	From 788.50’ to 823.60’	2’-6”	No
Exterior Wall (South)	-	From 788.50’ to 822.60’	2’-6”	No
Exterior Wall (East Wall of East Vault and West Wall of West Vault)	-	From 788.50’ to 823.60’	From 2’-6” to 4’-6”	No
Exterior Wall (West Wall of East Vault and East Wall of West Vault)	-	From 788.50’ to 823.60’	~~From~~ 2’-6” ~~to 4’-6”~~	No
Roof Slab	-	From 822.00’ to 823.60’	2’-0”	No
Mat Slab	-	788.50’	6’-6”	No

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NOTE:
Dash (-) indicates not applicable.

Appendix A.4

PART 10 - APPENDIX A.4

OFFSITE POWER SYSTEM (PORTIONS OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

RCOL2_14.03.07-28
CTS-01174

A.4.1 Design Description

1. The electrical system has a minimum of two independent offsite transmission circuits from the transmission network (TN) to the safety buses with no intervening non-safety buses (direct connection).

2. The offsite TN voltage variations, during steady-state operation, do not cause voltage variations beyond an acceptable tolerance of the loads' nominal ratings.

3. The offsite TN normal steady-state frequency is within an acceptable tolerance of 60Hz during recoverable periods of system instability.

4. The offsite transmission circuits have the capacity and capability to power the required loads during steady-state, transient, and postulated events and accident conditions.

5.a Independence between the offsite circuits and the onsite Class 1E electrical system and components is maintained.

5.b The offsite circuits are physically separated from the onsite Class 1E electrical system and components.

6. Lightning protection and grounding features are provided for the offsite circuits from the TN to the safety buses.

7. Alarms and displays for monitoring the switchyard equipment status can be retrieved in the MCR.

8. If power through the normal preferred power supply is not available, the offsite electrical system has the capability to automatic fast transfer to the alternate preferred power supply if available.

9. The switchyard agreement and protocols between NPP and the TN system owner/operator assess the risk and probability of a loss of offsite power due to performing maintenance activities on the electrical system.

10. The probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear unit, the loss of power from the TN, or the loss of power from the onsite electric power supplies, is minimized.

Appendix A.4

A.4.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table A.4-1 describes the ~~inspections, tests, analyses, and associated acceptance criteria~~ITAAC for the Offsite power system portions outside the scope of the certified design. CTS-01174

Appendix A.4

Table A.4-1 (Sheet 1 of 2)
Offsite Power System
(Portions Outside the Scope of the Certified Design)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
1. The electrical system has a minimum of two independent offsite transmission circuits from the transmission network (TN) to the safety buses with no intervening non-safety buses (direct connection).	1. Inspection of the as-built transmission circuits will be performed.	1. The as-built electrical system has two independent offsite transmission circuits from the TN to the safety buses with no intervening non-safety buses (direct connection).	
2. The offsite TN voltage variations, during steady-state operation, do~~es~~ not cause voltage variations beyond an acceptable tolerance of the loads' nominal ratings.	2. Analyses of the as-built offsite TN voltage variability and steady state load requirements will be performed.	2. A report exists and concludes that the as-built offsite TN, during steady state operation, does not cause voltage variations beyond design limits.	CTS-01174
3. The offsite TN normal steady state frequency is within an acceptable tolerance of 60Hz during recoverable periods of system instability.	3. Analyses of the as-built offsite TN normal steady state frequency will be performed.	3. A report exists and concludes that the as-built TN normal steady state frequency is within design frequency limits during recoverable periods of instability.	
4. The offsite transmission circuits have the capacity and capability to power the required loads during steady state, transient, and postulated events and accident conditions.	4. Analyses of the as-built offsite transmission circuits from the TN to the safety buses will be performed.	4. A report exists and concludes that the as-built offsite transmission circuits have the capacity and capability to power the required loads during steady state, transient, and postulated events and accident conditions.	
5.a Independence between the offsite circuits and the onsite Class 1E electrical system and components is maintained.	5.a Tests and analyses on the as-built offsite circuits and onsite class 1E electrical system and components will be performed.	5.a There is electrical independence between the as-built offsite circuits ~~are isolated from~~and the onsite Class 1E electrical system and components.	CTS-01174
5.b The offsite circuits are physically separated from the onsite Class 1E electrical system and components.	5.b Inspections of the as-built offsite circuits and onsite Class 1E electrical system and components will be performed.	5.b The as-built offsite circuits are physically separated from the as-built onsite Class 1E electrical system and components.	CTS-01174
6. Lightning protection and grounding features are provided for the offsite circuits from the TN to the safety buses.	6. Inspection of the as-built offsite circuits from the TN to the safety buses will be performed.	6. Lightning protection and grounding features exist for the system and components of the offsite circuits from the TN to the safety buses.	

Appendix A.4

Table A.4-1 (Sheet 2 of 2)
Offsite Power System
(Portions Outside the Scope of the Certified Design)
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
7. ~~MCR a~~Alarms and displays for monitoring the switchyard equipment status can be retrieved in the MCR.	7. Inspection will be performed for the retrievability of the as-built switchyard equipment status in the as-built MCR.	7. ~~MCR a~~Alarms and displays for monitoring the switchyard equipment status can be retrieved in the as-built MCR.	CTS-01174
8. If power through the preferred power supply is not available, the offsite electrical system has the capability to automatic fast transfer to the non-preferred power supply if available.	8. Inspection of the as-built offsite electrical system will be performed.	8. The as-built offsite electrical system is automatically transferred to the non-preferred power supply in power is not available through the preferred power supply.	
9. The ~~S~~switchyard agreement and protocols between the NPP and the TN system owner/operator~~/owner~~ assess the risk and probability of a loss of offsite power due to performing maintenance activities on the electrical system.	9. Inspection of the switchyard agreement and protocols between the NPP and the TN owner/operator will be performed.	9. The switchyard agreement and protocols between the NPP and the TN owner/operator assess the risk and probability of a loss of offsite power due to performing maintenance activities on the electrical system.	CTS-01174 CTS-01174
10. ~~The offsite electrical system (switchyard) design assesses the probability of losing electric power as a result of or coincident with, the loss of power generated by the nuclear unit, the loss of power from the TN, or the loss of the largest load.~~The probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear unit, the loss of power from the TN, or the loss of power from the onsite electric power supplies, is minimized.	10. Analyses of the as-built offsite electrical system for transient stability will be performed.	10. ~~A report exists and concludes that the as-built offsite electrical system design assesses the probability of losing electric power as a result of or coincident with the loss of power generated by the nuclear unit, the loss of power from the TN, or the loss of the largest load.~~A report exists and concludes that the probability of losing electric power from any of the remaining supplies as a result of, or coincident with the loss of power generated by the nuclear unit, the loss of power from the TN, or the loss of power from the onsite electric power supplies, is minimized.	CTS-01174

Appendix A.5

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PART 10 - APPENDIX A.5

PLANT-SPECIFIC PROCESS EFFLUENT RADIATION MONITORING AND SAMPLING (PERMS)

1. The PERMS includes the radiation monitors as identified in Table A.5-2. CTS-01174

A.5.1 Inspections, Tests, Analyses, and Acceptance Criteria

Table A.5-1 specifies the ITAAC for the plant-specific PERMS. CTS-01174

Table A.5-1
Process Effluent Radiation Monitoring and Sampling System
Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The PERMS includes the radiation monitors as identified in Table A.5-2.	1. An inspection will be performed of the as-built radiation monitors identified in Table A.5-2.	1. The as-built PERMS include the radiation monitors as identified in Table A.5-2.

Table A.5-2
Process Effluent Radiation Monitoring and Sampling System
Equipment Characteristics

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PERMS Monitor Name	Detector Number	Safety Related	Seismic Category I	Class 1E/ Harsh	Location
Startup Steam Generator Blowdown Heat Exchanger Downstream Radiation Monitor	RMS-RE-110	No	No	No/No	(Note 1)
Evaporation Pond Discharge Radiation Monitor	RMS-RE-111	No	No	No/No	(Note 2)

Note 1: The monitor is located adjacent to Startup Generator Blowdown Equipment shown in FSAR Figure 1.2-1R (Sheet 2 of 2)

Note 2: The monitor is located adjacent to radwaste evaporator pond shown in FSAR Figure 1.2-1R (Sheet 1 of 2)

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PART 10 - APPENDIX A.6

FIRE PROTECTION SYSTEM (PORTIONS OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

A.6.1 Design Description

1. The seismic standpipe system can be supplied from a seismic Category I water source (ESWS) with a capacity of at least 18,000 gallons.

2. The fire protection system water supply is from two separate, reliable freshwater sources (the two fire water storage tanks).

A.6.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table A.6-1 describes the ITAAC for the Fire Protection System (portions outside the scope of the certified design).

Table A.6-1
Fire Protection System (Portions outside the Scope of the Certified Design) Inspections, Test, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
1. The seismic standpipe system can be supplied from a seismic Category I water source (ESWS) with a capacity of at least 18,000 gallons.	1. Tests and analyses will be performed on the as-built system to confirm the ability of the ESWS to supply water to the seismic standpipes system.	1. A report exists and concludes that the seismic standpipe system is supplied with water from the ESWS with a capacity of at least 18,000 gallons.
2. The fire protection system water supply is from two separate, reliable freshwater sources (the two fire water storage tanks).	2. Tests will be performed to confirm the ability of the as-built fire water storage tanks to separately provide water to the fire protection water supply system.	2. The fire protection system is supplied with freshwater from two separate reliable freshwater sources.

Table B-1 (Sheet 1 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
1.0 Assignment of Responsibility – Organizational Control			
10 CFR 50.47(b)(1) – Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the EPZs have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principle response organization has staff to respond and to augment its initial response on a continuous basis.	1.1 The staff exists to provide 24-hour per day emergency response and manning of communications links, including continuous operations for a protracted period. [A.1.e, A.4]	1.1 An inspection of the emergency plan procedures will be performed.	1.1 Emergency plan procedures provide for 24-hour per day emergency response staffing and manning of communications links, including continuous operations for a protracted period.
2.0 Onsite Emergency Organization			
10 CFR 50.47(b)(2) – On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.	2.1 The staff exists to provide minimum and augmented on-shift staffing levels, consistent with Table B-1 of NUREG-0654/FEMA-REP-1, Rev. 1. [B.5, B.7]	2.1 An inspection of the emergency plan procedures will be performed.	2.1 Emergency plan procedures provide minimum and augmented on-shift staffing levels, consistent with Table II-2 of the Comanche Peak Nuclear Power Plant Units 3 & 4 Combined License (COL) Application Emergency Plan.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

Table B-1 (Sheet 2 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Response Support and Resources			
10 CFR 50.47(b)(3) – Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

Table B-1 (Sheet 3 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
~~1~~4.0 Emergency Classification System			
10 CFR 50.47(b)(4) – A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.	~~1~~4.1 A standard emergency classification and emergency action level (EAL) scheme exists, and identifies facility system and effluent parameters constituting the bases for the classification scheme. [D.1**] ~~[**D.1 corresponds to NUREG-0654 /FEMA-REP-1 evaluation criteria.]~~	~~1~~4.1 An inspection of the control room, technical support center (TSC), and emergency operations facility (EOF) will be performed to verify that they have displays for retrieving facility system and effluent parameters ~~in specific Emergency Action Levels (EALs) identified in the following list of EALs~~that constitute the bases for the classification scheme in Appendix 1, Section 5, of the Comanche Peak Units 3 and 4 COL Emergency Plan: **~~EALs in Emergency Plan Appendix 1, Section 5~~** ~~Abnormal Rad Levels/Radiological Effluent:~~	~~1~~4.1.1 ~~A report exists that confirms t~~The specific parameters identified in the **EALs in Emergency Plan Appendix 1, Section 5** have been retrieved and displayed in the control room, TSC, and EOF. ~~1~~4.1.2 ~~A report exists that confirms t~~The ranges available in the control room, TSC, and EOF encompassed the values for the specific parameters identified in the **EALs in Emergency Plan Appendix 1, Section 5**.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Table B-1 (Sheet 4 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
		~~1.1 (continued)~~ ~~AU1 EALs #1, 2, AU2 EAL #1, AA1 EALs #1, 2, AA2 EAL #2, AA3 EAL #1, AS1 EAL #1, AG1 EAL #1~~ ~~Cold Shutdown/Refueling System Malfunction:~~ ~~CU1, CU2, CU3, CU4, CU7, CU8, CA1, CA3, CA4, CS1, CG1~~ ~~Fission Product Barrier Thresholds:~~ ~~Fuel Clad Barrier Threshold Values~~ ~~2. Primary Coolant Activity Level~~ ~~3. Core Exit Thermocouple Readings~~ ~~4. Reactor Vessel Water Level~~ ~~6. Containment Radiation Monitoring~~ ~~RCS Barrier Threshold Values~~ ~~2. RCS Leak Rate~~ ~~4. SG Tube Rupture~~ ~~6. Containment Radiation Monitoring~~ ~~Containment Barrier Threshold Values~~ ~~2. Containment Pressure~~ ~~3. Core Exit Thermocouple Readings~~ ~~4. SG Secondary Side Release with P-to-S Leakage~~ ~~5. Containment Isolation Failure or Bypass~~ ~~6. Containment Radiation Monitoring~~ ~~Hazards and Other Conditions Affecting Plant Safety:~~ ~~HU1 EAL #1, HA1 EAL #1~~ ~~System Malfunctions:~~ ~~SU1, SU4, SU8, SA2, SA4, SA5, SS1, SS2, SS3, SS6, SG1, SG2~~	

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria	
~~2~~5.0 Notification Methods and Procedures				CTS-01174 RCOL2_13.03-15
10 CFR 50.47(b)(5) – Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and follow-up messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established	~~2~~5.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]	~~2~~5.1 A test will be performed of the capability to begin initial notification to State and local organizations no later than 15 minutes after the Luminant declares an emergency.	~~2~~5.1 A report exists and concludes that ~~confirms~~ communications have been established via a dedicated circuit between the control room and the following agencies and notifications began no later than 15 minutes after the declaration of an emergency: • Somervell County Sheriff or Dispatcher • Hood County Sheriff or Dispatcher • Texas Department of Public Safety	RCOL2_13.03-15
	~~2~~5.2 The means exist to notify emergency response personnel. [E.2]	~~2~~5.2 A test will be performed of the capabilities.	~~2~~5.2 A report exists and concludes that ~~confirms~~ notification to ~~mobilize CPNPP~~the Comanche Peak Units 3 and 4 emergency response organization has been performed. NOTE: Confirmation of the ability to mobilize the Comanche Peak Units 3 and 4 emergency response organization is addressed in Acceptance Criterion 14.1.1.2.B.1.b.	RCOL2_13.03-15 CTS-01174 RCOL2_13.03-15 CTS-01174

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

Table B-1 (Sheet 6 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
	25.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]	25.3 NOTE: The required test is included in Inspections, Tests, Analyses 814.1.	25.3 NOTE: The means to notify and provide instructions to the populace within the plume exposure pathway EPZ are addressed by Acceptance Criteria 814.1.1.2.
36.0 Emergency Communications			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	36.1 The means exist for communications among the control room, TSC, EOF, principal State and local emergency operations centers (EOCs), and radiological field assessment teams. [F.1.d] NOTE: Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses this EP Program Element in the following Design Commitments (DC): • Table.2.7.6.10-1, DC #2 • Table 2.9.1, DC #7l	36.1 A test of the as-built communications system will be performed. NOTE: For communications amongbetween the control room, and TSC , and from the control room and TSC to the EOF, principal State and local emergency operations centerEOCs, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Inspections, Tests, Analysis: • Table.2.7.6.10-1, ItemDC #2 • Table 2.9.1, Item #7l	36.1 A report exists and concludes that communications are established between the EOF and principal State and local EOCs, and radiological field assessment teams. NOTE: For communications amongbetween the control room,and TSC, and from the control and TSC to the EOF, principal State and local emergency operations centerEOCs, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criterion: • Table.2.7.6.10-1, ItemDC #2 • Table 2.9.1, Item #7l

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria	
	~~3~~6.2 The means exist for communications from the control room, TSC, and EOF to the NRC headquarters and regional office EOCs (including establishment of the Emergency Response Data System (ERDS) between the onsite computer system and the NRC Operations Center.) [F.1.f] NOTE: Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses this EP Program Element in the following Design Commitment~~s~~ (DC): • Table.2.7.6.10-1, DC #3 • ~~Table 2.10-1, DC #4~~	~~3~~6.2 A test of the as-built communications system will be performed. NOTE: For communications from the control room~~,~~ and TSC~~, and EOF~~ to the NRC headquarters and ~~regional~~Region IV office EOCs (including establishment of the ERDS [or its successor system] between the onsite computer system and the NRC Operations Center),Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses the following Inspections, Tests, Analys~~e~~is: • Table.2.7.6.10-1, DC #3 • ~~Table 2.10-1, DC #4~~	~~3~~6.2 A report exists and concludes that communications are established from the EOF to the NRC headquarters and Region IV office EOCs. NOTE: For communications from the control room~~,~~ and TSC~~, and EOF~~ to the NRC headquarters and ~~regional~~Region IV office EOCs (including establishment of the ERDS [or its successor system] between the onsite computer system and the NRC Operations Center),Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses the following Acceptance Criteri~~a~~on: • Table.2.7.6.10-1, DC #3 • Table 2.10-1, DC #4	CTS-01174 RCOL2_13.03-15 RCOL2_13.03-15 RCOL2_13.03-15 CTS-01174

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

Table B-1 (Sheet 8 of 36)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
47.0 Public Education and Information			
10 CFR 50.47(b)(7) – Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.	47.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]	47.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.	47.1 ~~A report exists that confirms t~~The Joint Information Center has space for approximately 75 media personnel~~been located in the Granbury City Hall at 116 W. Bridge Street, Granbury, TX~~.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
~~5~~8.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	~~5~~8.1 The licensee has established a technical support center (TSC) and onsite operations support center (OSC). [H.1] NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses this EP Program Element in the following Design Commitments (DC): • ~~Table 2.5.4-2, DC #1~~ • ~~Table.2.7.6.10-1, DC #4~~ • ~~Table 2.9-1, DC #7k~~ • Table 2.10-1, DC~~s~~ #1~~, 2, 3~~ • Table 2.7.5.4-3, DC #8 • Table 2.7.6.10-1, DCs #1, 2 and 3 • Table 2.5.4-2, DC #1	~~5~~8.1.1 NOTE: For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses the following Inspections, Tests, Analyses: • ~~Table 2.5.4-2, DC #1~~ • ~~Table.2.7.6.10-1, DC #4~~ • ~~Table 2.9-1, DC #7k~~ • Table 2.10-1, DCs #1, 2, 3 • Table 2.7.5.4-3, DC #8 • Table 2.7.6.10-1, DCs #1, 2 and 3 • Table 2.5.4-2, DC #1 ~~5~~8.1.2 An inspection of the as-built OSC will be performed.	~~5~~8.1.1 For the TSC, Tier 1 of the US-APWR Design Control Document (DCD), ~~Rev. 0,~~ addresses the following Acceptance Criteria: • ~~Table 2.5.4-2, DC #1~~ • ~~Table.2.7.6.10-1, DC #4~~ • ~~Table 2.9-1, DC #7k~~ • Table 2.10-1, DCs #1, 2, 3 • Table 2.7.5.4-3, DC #8 • Table 2.7.6.10-1, DCs #1, 2 and 3 • Table 2.5.4-2, DC #1 ~~5~~8.1.2.1 ~~A report exists that confirms t~~The OSC ~~was in a~~has been locate~~d~~~~ion~~ separately from the control room and TSC. ~~5~~8.1.2.2 ~~A report exists that confirms that OSC voice c~~Communication equipment ~~is installed~~has been provided in the OSC, and voice transmission and reception ~~are~~have been accomplished with:~~-~~ • Control Room • TSC

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria	
	~~5~~8.2 The licensee has established an emergency operations facility (EOF). [H.2]	~~5~~8.2 An inspection of the EOF will be performed.	~~5~~8.2.1 ~~A report exists that confirms t~~The EOF has~~d~~ at least 243 square meters (2,625 square feet).	CTS-01174 RCOL2_13.03-15
			~~5~~8.2.2.1 ~~A report exists that confirms t~~The EOF meets the following habitability criteria: • EOF is constructed to meet Texas Building Code • Protection factor (from direct radiation exposure) of greater than or equal to 5 in areas where dose assessments, communications, and decision making take place • Ventilation system has isolation with HEPA filters • ~~A backup EOF is located within 10 to 20 miles of the TSC~~ 8.2.2.2 The backup EOF is located within 10 to 20 miles of the TSC.	RCOL2_13.03-15 RCOL2_13.03-15

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			~~5~~8.2.3 ~~For the EOF, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criteria:~~ • ~~Table 2.5.4-2, DC #1~~ • ~~Table.2.7.6.10-1, Items #2, 3~~ • ~~Table 2.9-1, Item #7I.~~ • ~~Table 2.10-1, Item #4~~ Note: EOF communications with the control room, TSC, the NRC headquarters and Region IV office EOCs and State and local agencies are addressed in Acceptance Criteria 6.1.2 and 6.2.2. 8.2.4 The means have been established in the EOF to acquire, display, and evaluate radiological, meteorological, and plant system data pertinent to determining offsite protective measures

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
~~6~~9.0 Accident Assessment			
10 CFR 50.47(b)(9) – Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.	~~6~~9.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [I.2]	~~6~~9.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform radiological assessment.	~~6~~9.1 A report exists and concludes that ~~confirms~~ an exercise or drill has been accomplished including use of selected monitoring parameters identified in the **EALs in Emergency Plan Appendix 1, Section 5**, to assess simulated degraded plant and initiate protective actions in accordance with the following criteria: A. Accident Assessment and Classification 1. Initiating conditions identified, EALs parameters determined, and the emergency correctly classified throughout the drill.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			~~6~~9.1 (continued) B. Radiological Assessment and Control 1. Onsite radiological surveys performed and samples collected. 2. Radiation exposure to emergency workers monitored and controlled. 3. Field monitoring teams assembled and deployed. 4. Field team data collected and disseminated. 5. Dose projections developed. 6. The decision whether to issue radioprotective drugs to Luminant emergency workers made. 7. Protective action recommendations developed and communicated to appropriate authorities.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
	~~6~~9.2 The means exist to determine the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. [I.3]	~~6~~9.2 An analysis of emergency plan ~~implementing~~ procedures will be performed.	~~6~~9.2 ~~A report exists that confirms a methodology~~The means has been established to determine the source term of releases of radioactive material~~s~~ within plant systems and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors..
	~~6~~9.3 The means exist to continuously assess the impact of the release of radioactive materials to the environment, accounting for the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions. [I.4]	~~6~~9.3 An analysis of emergency plan ~~implementing~~ procedures will be performed.	~~6~~9.3 ~~A report exists that confirms a methodology~~The means has been provided to continuously assess the impact of the release of radioactive materials to the environment, accounting for~~establish~~ the relationship between effluent monitor readings~~,~~ and onsite and offsite exposures and contamination for various meteorological conditions.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria	
	69.4 The means exist to acquire and evaluate meteorological information. [I.5]	69.4 An inspection of the control room, TSC, and EOF will be performed to verify that the following meteorological data is available: - Wind speed (at 10 m and 60 m) - Wind direction (at 10 m and - 60 m) - Air temperature (at 10 m and 60 m)	69.4 ~~A report exists that confirms t~~The specified meteorological data was available at the control room, TSC, and EOF. 9.4.2 The means exist to provide the specified meteorological data to the offsite NRC center and the State of Texas EOC.	CTS-01174 RCOL2_13.03-15 RCOL2_13.03-15
	69.5 The means exist to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways, including activation, notification means, field team composition, transportation, communication, monitoring equipment, and estimated deployment times. [I.8]	69.5 An analysis of emergency plan ~~implementing~~ procedures will be performed.	69.5 ~~A report exists that confirms a methodology~~The means has been established to provide rapid assessment of the actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.	RCOL2_13.03-15
	69.6 The capability exists to detect and measure radioiodine concentrations in air in the plume exposure EPZ, as low as 10^{-7} µCi/cc (microcuries per cubic centimeter) under field conditions. [I.9]	69.6 A test of Luminant field survey instrumentation will be performed to verify the capability to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters.	69.6 A report exists and concludes that ~~confirms~~ instrumentation used for monitoring I-131 to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters has been provided.	RCOL2_13.03-15 CTS-01174

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
	~~6~~9.7 The means exist to estimate integrated dose from the projected and actual dose rates, and for comparing these estimates with the EPA protective action guides (PAGs). [I.10]	~~6~~9.7 An analysis of emergency plan ~~implementing~~ procedures will be performed ~~to verify that a methodology is provided to establish means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the following isotopes – Kr-88, Ru-106, I-131, I-132, I-133, I-134, I-135, Te-132, Xe-133, Xe-135, Cs-134, Cs-137, Ce-144~~.	~~6~~9.7 ~~A report exists that confirms t~~The means ~~for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the specified isotopes~~ has been established to make rapid assessments of actual or potential magnitude and locations of any radiological hazards through liquid or gaseous release pathways.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
~~7~~10.0 Protective Response			
10 CFR 50.47(b)(10) – A range of protective actions has been developed for the plume exposure EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure EPZ appropriate to the locale have been developed.	~~7~~10.1 The means exist to warn and advise onsite individuals of an emergency, including those in areas controlled by the operator, including:[J.1] a. employees not having emergency assignments; b. visitors; c. contractor and construction personnel; and d. other persons who may be in the public access areas, on or passing through the site, or within the owner controlled area.	~~7~~10.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.	~~7~~10.1.1 A report exists and concludes that ~~confirms that,~~ during a drill or exercise, notification and instructions were provided to onsite workers and visitors, within the Protected Area, over the plant public announcement system. ~~7~~10.1.2 A report exists and concludes that ~~confirms that,~~ during a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area. ~~7~~10.1.3 A report exists and concludes that ~~confirms that,~~ during a drill or exercise, individuals within Squaw Creek Park were notified by Squaw Creek Park personnel of the appropriate protective response.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
11.0 Radiological Exposure Control			
10 CFR 50.47(b)(11) – Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity PAGs.	11.1 The means exists to provide onsite radiation protection. [K.2]	11.1 An analysis of site procedures will be performed.	11.1 Site procedures provide the means for onsite radiation protection.
	11.2 The means exists to provide 24-hour-per-day capability to determine the doses received by emergency personnel and maintain dose records. [K.3]	11.2 An analysis of emergency plan procedures will be performed.	11.2 Emergency plan procedures provide the means for 24- hour-per-day capability to determine the doses received by emergency personnel and maintain dose records.
	11.3 The means exists to decontaminate relocated onsite and emergency personnel, including waste disposal. [K.5.b, K.7]	11.3 An analysis of emergency plan procedures will be performed.	11.3 Emergency plan procedures provide a means to decontaminate relocated onsite and emergency personnel, including waste disposal.
	11.4 The means exists to provide onsite and contamination control measures. [K.6]	11.4 An analysis of site procedures will be performed.	11.4 Site procedures provide the means for onsite contamination control measures.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
12.0 Medical and Public Health Support			
10 CFR 50.47(b)(12) – Arrangements are made for medical services for contaminated, injured individuals.	12.1 Arrangements have been implemented for local and backup hospital and medical services having the capability for evaluation of radiation exposure and uptake. [L.1]	12.1 An analysis of letters of agreement will be performed.	12.1 Arrangements have been implemented with Lake Granbury Medical Center (LGMC) in Granbury, Texas and the Texas Health Harris Methodist Hospital Cleburne (Formerly Walls Regional Hospital) in Cleburne, Texas for evaluation of radiation exposure and uptake.
	12.2 The means exists for onsite first aid capability. [L.2]	12.2 An analysis of emergency plan procedures will be performed.	12.2 Onsite procedures provide for onsite first aid capability.
	12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities. [L.4]	12.3 An analysis of letters of agreement will be performed.	12.3 Arrangements have been implemented for transporting victims of radiological accidents, including contaminated injured individuals, from the site to offsite medical support facilities.
13.0 Exercises and Drills			
10 CFR 50.47(b)(13) – General plans for recovery and reentry are developed.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.	Not used. Provided for consistency with Reg. Guide 1.206 Table C.II.1-B1 Emergency Planning—Generic Inspection, Test, Analysis, and Acceptance Criteria (EP-ITAAC) ITAAC numbering scheme.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
~~8~~14.0 Exercises and Drills			
10 CFR 50.47(b)(14) – Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.	~~8~~14.1 Licensee conducts a full-participation exercise to evaluate major portions of emergency response capabilities, which includes participation by each State and local agency within the plume exposure EPZ, and each State within the ingestion control EPZ. [N.1]	~~8~~14.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	~~8~~14.1.1.1 A report exists and concludes that ~~confirms~~ an exercise was conducted within the specified time periods of Appendix E to 10 CFR Part 50, onsite exercise objectives were met, and there were no uncorrected onsite exercise deficiencies.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			8~~14~~.1.1.2 A report exists and condludes that ~~confirms~~ the following exercise objectives were satisfied by meeting the~~,~~ ~~including~~ specific performance~~acceptance~~ criteria~~, addressed each of the following Emergency Planning (EP) Program Elements~~: - ~~Emergency Classification~~ - ~~Notification and Emergency Communications~~ - ~~Emergency Public Information~~ - ~~Emergency Facilities and Equipment~~ - ~~Accident Assessment~~ - ~~Protective Response and Protective Action Recommendations~~ - ~~Radiological Exposure Control~~ - ~~Recovery and Re-Entry~~ *A. Accident Assessment and Classification* 1. Demonstrate the ability to identify initiating conditions, determine emergency action level (EAL) parameters, and correctly classify the emergency throughout the exercise. Performance Criteria:

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			a. Determine the correct emergency classification level based on events which were in progress, considering past events and their impact on the current conditions, within 15 minutes from the time the initiating condition(s) or EAL is identified. *B. Notifications* 1. Demonstrate the ability to alert, notify and mobilize site emergency response personnel. Performance Criteria: a. Complete the designated actions in accordance with emergency plan procedures and perform the announcement within 15 minutes of the initial event classification for an Alert or higher. b. Mobilize site emergency responders in accordance with emergency plan procedures within 15 minutes of the initial event classification for an Alert or higher.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			2. Demonstrate the ability to notify responsible State, local government agencies beginning no later than 15 minutes and the NRC no later than 60 minutes after declaring an emergency. Performance Criteria: a. Transmit information in accordance with approved emergency plan procedures no later than 15 minutes after event classification. b. Transmit information in accordance with approved emergency plan procedures, no later than 60 minutes after last transmittal for a follow-up notification to State and local authorities. c. Transmit information in accordance with emergency plan procedures no later than 60 minutes after event classification for an initial notification of the NRC. 3. Demonstrate the ability to warn or advise onsite individuals of emergency conditions.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			Performance Criteria: a. Initiate notification of onsite individuals within 15 minutes of notification. *C. Emergency Response* 1. Demonstrate the capability to direct and control emergency operations. Performance Criteria: a. Command and control is demonstrated by the Control Room in the early phase of the emergency, and the technical support center (TSC) within 60 minutes of declaration of an Alert or higher emergency classification. 2. Demonstrate the ability to transfer emergency direction from the control room (simulator) to the TSC upon activation.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			Performance Criteria: a. Turnover briefings are conducted in accordance with emergency plan procedures. b. Documentation of transfer of duties is completed in accordance with emergency plan procedures. 4. Demonstrate the ability to perform assembly and accountability for all onsite individuals within 30 minutes of an emergency requiring protected area assembly and accountability. Performance Criteria: a. Protected area (PA) personnel assembly and accountability completed within 30 minutes of an emergency requiring protected area assembly and accountability.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			D. Emergency Response Facilities 1. Demonstrate activation of the operational support center (OSC), and full functional operation of the TSC and EOF within 60 minutes declaration of Alert or higher emergency classification. Performance Criteria: a. The TSC, EOF and OSC are activated within about 60 minutes of the initial notification. 2. Demonstrate the adequacy of equipment, security provisions, and habitability precautions for the TSC, OSC and EOF as appropriate. Performance Criteria: a. Emergency equipment in the emergency response facilities as specified in emergency plan procedures was available to emergency responders.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			b. The Security Shift Supervisor implements and follows applicable emergency procedures. c. The TSC On-Site Radiological Assessment Coordinator implements designated responsibilities in accordance with emergency plan procedures if an onsite/offsite release has occurred. 3. Demonstrate the adequacy of communications for all emergency support resources. Performance Criteria: a. Emergency response facility personnel are able to operate communication systems in accordance with emergency plan procedures. b. Clear primary and backup communications links are established and maintained for the duration of the exercise.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			E. Radiological Assessment and Control 1. Demonstrate the ability to obtain onsite radiological surveys and samples. Performance Criteria: a. Radiation Protection Technicians demonstrate the ability to obtain appropriate instruments (range and type) and perform surveys. b. Airborne samples are taken in accordance with emergency plan procedures. 2. Demonstrate the ability to continuously monitor and control radiation exposure to emergency workers. Performance Criteria:

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			a. Emergency workers are issued self reading dosimeters when radiation levels require, and exposures are controlled to 10 CFR Part 20 limits (unless the Emergency Coordinator authorizes emergency limits). b. Exposure records are available. c. Emergency workers include Security and personnel within all emergency facilities. 3. Demonstrate the ability to assemble and deploy field monitoring teams within 60 minutes from the decision to do so. Performance Criteria: a. One Field Monitoring team is ready to be deployed within 15 - 30 minutes of their arrival onsite. In addition, an offsite monitoring team must be able to be dispatched within 55-70 minutes of an Alert or higher emergency classification.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			4. Demonstrate the ability to collect and disseminate field team data. Performance Criteria: a. Field team collects data for dose rate and airborne radioactivity levels in accordance with emergency plan procedures. b. Field team communicates data to the TSC and/or EOF in accordance with emergency plan procedures. 5. Demonstrate the ability to develop dose projections. Performance Criteria: a. Timely and accurate dose projections are performed in accordance with emergency plan procedures. 6. Demonstrate the ability to make the decision whether to issue radioprotective drugs (KI) to onsite emergency workers.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			Performance Criteria: a. KI is taken (simulated) if the estimated dose to the thyroid will exceed 25 rem committed dose equivalent (CDE). 7. Demonstrate the ability to develop appropriate protective action recommendations (PARs) and notify appropriate authorities no later than 15 minutes after development. Performance Criteria: a. Total effective dose equivalent (TEDE) and CDE dose projections from the dose assessment computer code are compared in accordance with emergency plan procedures. b. 'PARs are developed no later than 15 minutes after data availability. c. PAR's are transmitted via voice or fax no later than 15 minutes after event classification and/or PAR development.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			F. Public Information 1. Demonstrate the capability to develop and disseminate clear, accurate, and timely information to the news media in accordance with EPPs. Performance Criteria: a. The Joint Information Center (JIC) is activated within 60 minutes following the declaration of a Site Area Emergency or higher classification or following the Emergency Coordinator's or JIC Director's instruction to do so. b. Follow-up information is provided to the news media, during scheduled news conferences and media briefings. 2. Demonstrate the capability to establish and effectively operate rumor control in a coordinated fashion. Performance Criteria:

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			a. Calls are answered in a timely manner with the correct information, in accordance with emergency plan procedures. b. Calls are returned or forwarded, as appropriate, to demonstrate responsiveness. c. Rumors are identified and addressed in accordance with emergency plan procedures. *G. Evaluation* 1. Demonstrate the ability to conduct a post-exercise critique, to determine areas requiring improvement and corrective action. Performance Criteria: a. An exercise time line is developed, followed by an evaluation of the objectives.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria	
			b. Significant problems in achieving the objectives are discussed to ensure understanding of why objectives were not fully achieved. c. Recommendations for improvement in non-objective areas are discussed.	RCOL2_13.03-15
			~~8~~14.1.2.1 A report exists and condludes that ~~confirms~~ onsite emergency response personnel were mobilized to fill emergency response positions and there were no uncorrected onsite exercise deficiencies.	CTS-01174
			~~8~~14.1.2.2 A report exists and concludes that ~~confirms~~ onsite emergency response personnel performed their assigned responsibilities as provided in Section B of the Comanche Peak Units 3 and 4 Combined License Application Emergency Plan and there were no uncorrected onsite exercise deficiencies.	RCOL2_13.03-15 CTS-01174 RCOL2_13.03-15

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
			14.1.3 A report exists and concludes that the exercise was completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives were met, and there are no uncorrected deficiencies or a licensee condition requires offsite deficiencies to be addressed prior to operation above 5% of rated power.
15.0 Radiological Emergency Response Training			
10 CFR 50.47(b)(15) – Radiological emergency response training is provided to those who may be called upon to assist in an emergency.	15.1 Site-specific emergency response training has been provided for those who may be called upon to provide assistance in the event of an emergency. [O.1]	15.1 An inspection of training records will be performed.	15.1 Site-specific emergency response training has been provided for local fire departments, law enforcement, ambulance, and hospital personnel.
16.0 Responsibility for the Planning Effort: Development , Periodic Review, and Distribution of Emergency Plans			
10 CFR 50.47(b)(16) – Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.	16.1 The emergency response plans have been forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. [P.5]	16.1 An inspection of the distribution letter will be performed.	16.1 The Comanche Peak Nuclear Power Plant Unit 3 & 4 COL Application Emergency Plan was forwarded to the Texas Governor's Division of Emergency Management, the Hood County Judge and the Somervell County Judge.

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** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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Planning Standard	EP Program Elements**	Inspections, Tests, Analyses	Acceptance Criteria
17.0 Implementing Procedures			
10 CFR Part 50, App. E.V – No less than 180 days before the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to the Commission.	17.1 The licensee has submitted detailed implementing procedures for its emergency plan no less than 180 days prior to fuel load.	17.1 An inspection of the submittal letter will be performed.	17.1 Luminant has submitted detailed emergency plan procedures for the onsite emergency plan, to the NRC, no less than 180 days prior to fuel load.

** References in brackets correspond to NUREG-0654/FEMA-REP-1, Rev. 1 Evaluation Criteria

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PART 10 - APPENDIX C

PHYSICAL SECURITY HARDWARE

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C.1 Design Description

1.b Access to vital equipment requires passage through at least two physical barriers.

2.a Physical barriers for the protected area perimeter are not part of vital area barriers.

2.b Penetrations through the protected area barrier are secured and monitored.

2.c Unattended openings of passable size that intersect a security boundary such as underground pathways must be protected by a physical barrier and monitored by intrusion detection equipment or provided with surveillance at a frequency sufficient to detect exploitation.

3.a Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allow sufficient size for observation and assessment on either side of the barrier.

3.b Isolation zones are monitored with intrusion detection and assessment equipment that can provide detection and assessment of activities within the isolation zone.

3.c Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barriers (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) are monitored with intrusion detection and assessment equipment that is designed to detect and assess the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier.

4.a The perimeter intrusion detection system (IDS) can detect penetration or attempted penetration of the protected area perimeter barrier and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations.

4.b The perimeter assessment equipment can provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.

4.c Intrusion detection and assessment equipment at the protected area perimeter remains operational from an uninterruptible power supply in the event of the loss of normal power.

5.	Isolation zones and exterior areas within the protected area are provided with illumination to permit observation of activities within exterior areas of the protected area.	CTS-01174
6.b	The external walls, doors, ceilings and floors in the secondary alarm station and the last access control function for access to the protected area are bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III.	
7.	The vehicle barrier system is designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.	
8.a	Access control points are established to control personnel and vehicle access into the protected area.	
8.b	Access control points are designed and established with equipment to detect firearms, explosives, incendiary devices, and other items which could be used to commit radiological sabotage at the protected area personnel access points.	
9.	An access control system with a numbered photo identification badge system is designed and installed for use by individuals who are authorized access to protected areas and vital areas without escort.	
10.b	Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the secondary alarm station.	
11.a.ii	Security alarm annunciation and video assessment information are available in the secondary alarm station concurrently with the central alarm station.	
11.b.ii	The secondary alarm station is located inside a protected area and the interior of the secondary alarm station is not visible from the perimeter of the protected area.	
11.c.i	The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the central alarm station without the knowledge and concurrence of the secondary alarm station operator.	
11.c.ii	The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the secondary alarm station without the knowledge and concurrence of the central alarm station operator.	

11.d	Central and secondary alarm stations are designed, equipped, and constructed such that no single act, in accordance with the design basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to: (1) detect and assess alarms (2) initiate and coordinate an adequate response to alarms (3) summon offsite assistance, and (4) provide effective command and control.	CTS-01174
11.e	Both the central and secondary alarm stations are constructed, protected, and equipped to the standards for the central alarm station.	
13.b.ii	Intrusion detection and assessment systems provide visual display and audible annunciation in the secondary alarm station.	
15.b	Emergency exits through the protected area perimeter are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.	
16.a.ii	The secondary alarm station has conventional (land line) telephone service with local law enforcement authorities and a system for communication with the main control room.	
16.b.ii	The secondary alarm station is capable of continuous communication with security personnel.	
16.c.ii	Nonportable communications equipment in the secondary alarm station will remain operational from an independent power source in the event of loss of normal power.	

C.2 Inspections, Tests, Analyses, and Acceptance Criteria

Table C-1 specifies the ~~inspections, tests, analyses, and associated acceptance criteria~~ITAAC for the site-specific physical security hardware. CTS-01174

Table C-1 (Sheet 1 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
1.b Access to vital equipment requires passage through at least two physical barriers.	1.b Inspections will be performed of vital equipment locations.	1.b. Vital equipment is located such that access to the vital equipment requires passage through at least two physical barriers.	
2.a Physical barriers for the protected area perimeter are not part of vital area barriers.	2.a Inspections of the protected area perimeter barriers will be performed.	2.a Physical barriers at the perimeter of the protected area are separated from any other barrier designated as a ~~V~~vital ~~A~~area barrier.	CTS-01174
2.b Penetrations through the protected area barrier are~~must be~~ secured ~~and be capable of being~~and monitored.	2.b Inspections will be performed of penetrations through the protected area barrier.	2.b Penetrations and openings of a passable size through the protected area barrier are secured and monitored by intrusion detection equipment.	CTS-01174
2.c Unattended openings of passable size that intersect a security boundary such as underground pathways must be protected by a physical barrier and monitored by intrusion detection equipment or provided with surveillance at a frequency sufficient to detect exploitation.	2.c Inspections will be performed of unattended openings of passable size within the protected area barriers.	2.c Unattended openings of a passable size~~,~~ (such as underground pathways) that intersect a security boundary ~~(such as the protected area barrier)~~, are protected by a physical barrier and monitored by intrusion detection equipment or provided with surveillance at a frequency sufficient to detect exploitation.	CTS-01174
3.a Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allow sufficient size for observation and assessment on either side of the barrier.	3.a Inspections of the ~~isolation zones~~ outdoor areas adjacent to the protected area perimeter~~physical~~ barrier will be performed.	3.a The isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and allow 20 feet for observation and assessment of the activities of people on either side of the barrier.	

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Table C-1 (Sheet 2 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
3.b ~~Where permanent buildings do not allow a sufficient distance for observation on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier, and the (license applicant specified) observation distance does not apply.~~ Isolation zones are monitored with intrusion detection and assessment equipment that can provide detection and assessment of activities within the isolation zone.	3.b ~~Inspections of the part of the building that constitutes the protected area will be performed.~~ The intrusion detection equipment for monitoring the isolation zones will be inspected.	3.b ~~Where permanent buildings do not allow a 20 feet distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier and the 20 feet observation distance does not apply.~~ Isolation zones are monitored by intrusion detection and assessment equipment capable of providing detection and assessment of activities within the isolation zone.	CTS-01174
3.c Areas where permanent buildings do not allow sufficient observation distance between the intrusion detection system and the protected area barriers (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) are monitored with intrusion detection and assessment equipment that is designed to detect and assess the attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier.	3.c Inspections of the areas of the protected area perimeter barrier that do not have isolation zones will be performed.	3.c Areas where permanent buildings do not allow a minimum of 20 feet observation distance between the intrusion detection system and the protected area barrier (e.g., the building walls are immediately adjacent to, or are an integral part of the protected area barrier) are monitored with intrusion detection and assessment equipment that detect and assess attempted or actual penetration of the protected area perimeter barrier before completed penetration of the barrier.	RCOL2_14.03.12-5 CTS-01174
4.a The ~~Intrusion~~perimeter instrusion detection system (IDS) can detect penetration or attempted penetration of the protected area perimeter barrier and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations~~, (central and secondary alarm stations)~~.	4.a Tests, inspections, or a combination of tests and inspections of the intrusion detection system will be performed.	4.a The ~~intrusion detection system~~IDS can detect penetration or attempted penetration of the protected area perimeter barrier before completed penetration of the barrier, and subsequent alarms annunciate concurrently in at least two continuously manned onsite alarms stations~~, (central and secondary alarm stations)~~.	

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Table C-1 (Sheet 3 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
4.b ~~Video image recording equipment with real-time and play-back capability provides the ability to assess detected assessment activities before and after each alarm annunciation within the isolation zone.~~The perimeter assessment equipment can provide video image recording with real-time and playback capability that can provide assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.	4.b Tests, inspections, or a combination of tests and inspections of the video assessment equipment will be performed.	4.b ~~Video image recording equipment with real-time and play-back capability provide the ability to display activities before and after each alarm annunciation within the isolation zone.~~The perimeter assessment equipment is capable of video image recording equipment with real-time and play-back video image recording that provides assessment of detected activities before and after each alarm annunciation at the protected area perimeter barrier.	CTS-01174
4.c Intrusion detection and assessment equipment at the protected area perimeter remains ~~operable~~operational from an uninterruptible power supply in the event of the loss of normal power.	4.c Tests, inspections or a combination of tests and inspections of the uninterruptible power supply will be performed.	4.c Intrusion detection and assessment equipment at the protected area perimeter remains ~~operable~~operational from an uninterruptible power supply in the event of the loss of normal power.	
5. Isolation zones and exterior areas within the protected area are provided with illumination to permit observation of activities within exterior areas of the protected area.~~abnormal presence or activity of persons or vehicles.~~	5. Inspections or tests of the ~~i~~illumination in isolation zones and exterior areas of the protected will be performed.	5. Illumination in isolation zones and exterior areas within the protected area is 0.2 foot-candles measured horizontally at ground level or~~,~~ alternatively~~,~~ sufficient to permit observation and assessment.	CTS-01174
6.b The external walls, doors, ceilings and floors in the secondary alarm station and the last access control function for access to the protected area are bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III.	6.b Type test, analysis or a combination of type test and analysis of the external walls, doors, ceiling and floors in the secondary alarm station and the last access control function for access to the protected area will be performed.	6.b A report exists and concludes that the external walls, doors, ceilings, floors in the secondary alarm station and the last access control function for access to the protected area are bullet resistant, to at least Underwriters Laboratories Ballistic Standard 752, "The Standard of Safety for Bullet-Resisting Equipment," Level 4, or National Institute of Justice Standard 0108.01, "Ballistic Resistant Protective Materials," Type III~~ to , UL752 (2006) Level 4~~.	

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Table C-1 (Sheet 4 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
7. ~~The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.~~The vehicle barrier system is designed, installed, and located at the necessary standoff distance to protect against the design-basis threat vehicle bombs.	7. ~~Inspections will be performed for the vehicle barrier system.~~Type test, inspections, and analysis will be performed for the vehicle barrier system.	7. ~~The vehicle barrier system will protect against the DBT vehicle bombs based upon the stand-off distance for the system.~~A validated report reviewed in accordance with NUREG/CR-6190 exists and concludes that the vehicle barrier system will protect against the design-basis threat vehicle bombs based on the standoff distance for the system.
8.a Access control points are established to control personnel and vehicle access into the protected area.	8.a Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.	8.a Access control points exist for the protected area and are configured to control access and are equipped with locking devices, intrusion detection equipment and surveillance equipment consistent with the intended function.
8.b Access control points are designed and established with equipment to detect firearms, explosives, ~~and~~ incendiary devices, and other items which could be used to commit radiological sabotage at the protected area personnel access points.	8.b Tests, inspections, or a combination of tests and inspections of installed systems and equipment will be performed.	8.b ~~The detection equipment at the protected area personnel access points is capable of detecting firearms, explosives, and incendiary devices.~~Detection equipment exists and is capable of detecting firearms, explosives, incendiary devices or other items which could be used to commit radiological sabotage at the protected area personnel access control points.
9. An ~~security~~ access control system with a numbered ~~picture~~photo identification badge~~s~~ system is designed and installed for use by individuals who are authorized access to protected areas and vital areas without escort.	9. Tests of the access control system with numbered ~~picture~~photo identification badge~~s~~ system will be performed.	9. ~~The access authorization system utilizes numbered picture badges, and authorizes protected area access only~~The access authorization system with a numbered photo identification badge system is installed and provides authorized access to protected and vital areas to those personnel with unescorted access authorization.

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Table C-1 (Sheet 5 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
10.b Unoccupied vital areas are locked and alarmed with activated intrusion detection systems that annunciate in the secondary alarm station.	10.b Tests, inspections, or a combination of tests and inspections of unoccupied vital areas intrusion detection equipment and locking devices will be performed.	10.b Unoccupied vital areas are locked and intrusion is detected and annunciated in the secondary alarm station.	
11.a ~~2~~.ii Security alarm annunciation and video assessment information are available in the secondary alarm station concurrently ~~in the secondary alarm station~~with the central alarm station.	11.a ~~2~~.ii Tests, inspections or a combination of tests and inspections of alarm annunciation and video assessment equipment will be performed.	11.a ~~2~~.ii Security alarm annunciation and video assessment equipment information is available ~~concurrently~~ in the secondary alarm station concurrently with the central alarm station.	CTS-01174
11.b ~~2~~.ii The secondary alarm station is located inside a protected area and the interior of the secondary alarm station is not visible from the perimeter of the protected area	11.b ~~2~~.ii Inspections of the secondary alarm station location~~s~~ will be performed.	11.b ~~2~~.ii The secondary alarm station is located inside a protected area and the interior of the secondary alarm station is not visible from the perimeter of the protected area.	
11.c.i The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the central alarm station without the knowledge and concurrence of the secondary alarm station operator.	11.c.i Tests, inspections, or a combination of intrusion detection equipment and access control equipment will be performed.	11.c.i The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the central alarm station without the knowledge and concurrence secondary alarm station operator.	CTS-01174
11.c.ii The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the secondary alarm station without the knowledge and concurrence of the central alarm station operator.	11.c.ii Tests, inspection, or a combination of tests and inspections of intrusion detection equipment and access control equipment will be performed.	11.c.ii The alarm system will not allow the status of a detection point, locking mechanism or access control device to be changed from the secondary alarm station without the knowledge and concurrence of the alarm station operator in the central alarm station operator.	RCOL2_14.03.12-5 CTS-01174

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Table C-1 (Sheet 6 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
11.~~c~~d Central and secondary alarm stations are designed, ~~and~~ equipped, and constructed such that~~, in the event of a~~ no single act, in accordance with the design basis threat of radiological sabotage, can simultaneously remove the ability of both the central and secondary alarm stations to~~the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to~~: (1) detect and assess alarms (2) initiate and coordinate an adequate response to alarms (3) summon offsite assistance, and (4) provide effective command and control.	11.~~c~~d Tests, inspections or a combination of tests and inspections of the central and secondary alarm stations will be performed.	11.~~c~~d Central and secondary alarm stations are designed, equipped and constructed such that~~, in the event of a~~ no single act, in accordance with the design basis threat of radiological sabotage, ~~the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to~~can simultaneously remove the ability of the central and secondary alarm stations to: (1) detect and assess alarms (2) initiate and coordinate an adequate response to alarms (3) summon offsite assistance, and (4) provide effective command and control.	RCOL2_14.03.12-5 CTS-01174
11.~~d~~e Both the central and secondary alarm stations are constructed, protected, and equipped to the standards for the central alarm station ~~(stations need not be identical in design)~~.	11.~~d~~e Tests, inspections or a combination of tests and inspections of the central and secondary alarm stations will be performed.	11.~~d~~e The central alarm station and secondary alarm station are constructed, protected, and equipped to the same standards for functional redundancy ~~(stations need not be identical in design)~~.	RCOL2_14.03.12-5 CTS-01174
13.b ~~2~~.ii Intrusion detection and assessment systems ~~are designed to~~ provide visual display and audible annunciation in the secondary alarm station.	13.b ~~2~~.ii Tests will be performed on ~~i~~intrusion detection and assessment systems.	13.b ~~2~~.ii The intrusion detection system provides a visual display and audible annunciation of alarms in the secondary alarm station.	
15.b Emergency exits through the protected area perimeter are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.	15.b Tests, inspections or a combination of tests and inspections of emergency exits through the protected area perimeter will be performed.	15.b Emergency exits through the protected area perimeter are alarmed with intrusion detection devices and secured by locking devices that allow prompt egress during an emergency.	CTS-01174
16.a ~~2~~.ii The secondary alarm station has conventional (land line) telephone service with local law enforcement authorities and a system for communication with the main control room.	16.a ~~2~~.ii Tests, inspections, or a combination of tests and inspections of the secondary alarm station communications capability with local law enforcement authorities and main control room will be performed	16.a ~~2~~.ii The secondary alarm station is equipped with conventional (land line) telephone service with local law enforcement authorities and has a system for ~~continuous~~ communication with the main control room.	CTS-01174 CTS-01174

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Table C-1 (Sheet 7 of 7)
Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria	
16.b~~-2~~.ii The secondary alarm station is capable of continuous communication with security personnel.	16.b~~-2~~.ii Tests, inspections, or a combination of tests and inspections of the secondary alarm station continuous communication capabilities will be performed.	16.b~~-2~~.ii The secondary alarm station is capable of continuous communication with on-duty watchmen, armed security officers, ~~watchmen or~~ armed ~~response individuals~~responders, or other security personnel that have responsibilities within the physical protection program and during ~~a~~ contingency response events.	CTS-01174
16.c.ii Nonportable communications equipment in the secondary alarm station will remain operational from an independent power source in the event of loss of normal power.	16.c.ii Tests, inspections, or a combination of tests and inspections of the nonportable communications equipment will be performed.	16.c.ii Nonportable communication devices (including conventional telephone systems) in the secondary alarm station are wired to an independent power supply that enables those systems to remain operable, without disruption, during the loss of normal power.	RCOL2_14.03.12-5 CTS-01174