Comanche Peak Nuclear Power Plant
Units 3 and 4

COL Application

Part 10

Inspections, Tests, Analyses And Acceptance Criteria (ITAAC) And Proposed License Conditions

Revision 1

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Part 10 - ITAAC and Proposed License Conditions

1. ITAAC

The ITAAC for the COLA consist of the following:

1) Design Certification ITAAC are contained in DCD Tier 1 and are incorporated by reference.
2) Plant-Specific ITAAC are provided in Appendices A.1, A.2, and A.3, and A.4. The design description information contained in the Appendices is a compilation of information from various sources in the FSAR and is included to assist the reader in reviewing information pertinent to the Plant-Specific ITAAC.
3) Emergency Planning ITAAC are provided in Appendix B.
4) Physical Security ITAAC for the DCD are contained in DCD Tier 1 and are incorporated by reference. Plant Specific Security ITAAC are provided in Appendix C.

2. Proposed License Conditions

The NRC and industry are currently evaluating the appropriate license conditions for a Combined Operating License (COL). Identified below are several possible topics for license conditions that serve as a starting point for consideration. The listing is not final nor are all items necessarily appropriate. As a result, this section will not be updated during the COL review until further NRC and industry guidance is available. As specific license conditions are identified they will be added to section 3 below.

2.1 Completion of ITAAC

Completion of the ITAAC listed in the previous section may be a proposed license condition to be satisfied prior to fuel load. However, this license condition may not be necessary as the ITAAC may be adequately controlled by the regulations.

2.2 COL Holder Items

COL Information Items are identified in Chapter 1 of the FSAR (Table 1.8-201) and are cross-referenced to identify the section in this COLA that addresses each Information Item from the referenced certified design. Items that cannot be resolved prior to issuance of the COL are identified as Holder Items. Implementation of all Holder Items by the milestone stated in the relevant section of the FSAR, is potential condition to the license. There are alternate methods to track these items including a commitment tracking system or NRC inspection schedules. If such alternate systems are found to be appropriate, a license condition may not be necessary or a more limited license condition addressing only selected Holder Items may be appropriate.

2.3 Operational Programs

Operational Programs are identified in Table 13.4-201 and their implementation by the milestones indicated in the Table is a potential condition to the license. Some of these programs may be adequately controlled by other methods such as the regulations, the technical specifications or a commitment tracking system and will not need to be addressed in a license condition. A proposed license condition is provided in section 3 below based upon the current information in Chapter 13 of the COLA FSAR.

2.4 Environmental Protection Plan

The Environmental Protection Plan (EPP) and its implementation may also be a potential condition to the license. The EPP has typically been an appendix to the operating license and that precedent may be followed for COLs as well. No plant specific environmental items have been identified which are not adequately controlled by regulations, the appropriate permits, etc. and thus an EPP has not been proposed and is not needed.

2.5 Technical Specifications

Implementation of Technical Specifications prior to fuel load could also constitute a potential condition to the license. The Technical Specifications have typically been an appendix to the operating license and that precedent may be followed for COLs as well.

2.6 Others

The current operating licenses have some typical license conditions in areas such as security, fire protection and others. These current license conditions may or may not apply to COLs.

3. Specific Proposed License Conditions

The license conditions identified thus far during the COL development and review are:

Proposed License Condition	Source
The plant-specific PTS evaluation of the as-procured reactor vessel material properties will be submitted to the NRC within 12 months following acceptance of the reactor vessel.	Answer to RAI 2353 (CP RAI #8) question 05.03.02-3 as provided in TXNB-09028 dated August 7, 2009.
The licensee shall implement the programs or portions of programs identified in the table below on or before the associated milestones.	COLA FSAR Table 13.4-201 Items 3, 5, 6, 8, 9, 10, 12, 15, 18, and 19.

Operational Programs to be implemented per License Condition above:

Program Title	Milestone
Environmental Qualification Program	Prior to Initial Fuel Load
Reactor Vessel Material Surveillance Program	Prior to Initial Criticality
Preservice Testing Program	Prior to Initial Fuel Load
Fire Protection Program	Prior to fuel receipt for elements of the Fire Protection Program necessary to support receipt and storage of fuel on-site. Prior to initial fuel load for elements or the Fire Protection Program necessary to support fuel load and plant operation.
Process and Effluent Monitoring and Sampling Program – Radiological Effluent Technical Specifications/Standard Radiological Effluent Controls	Prior to receipt of radioactive material on-site
Process and Effluent Monitoring and Sampling Program – Offsite Dose Calculation Manual	Prior to receipt of radioactive material on-site
Process and Effluent Monitoring and Sampling Program – Radiological Environmental Monitoring Program	Prior to receipt of radioactive material on-site
Process and Effluent Monitoring and Sampling Program – Process Control Program	Prior to receipt of radioactive material on-site
Radiation Protection Program	Prior to initial receipt of by-product, source, or special nuclear materials (excluding Exempt Qualities as described in 10 CFR 30.18) for those elements of the Radiation Protection (RP) Program necessary to support such receipt Prior to fuel receipt for those elements of the RP Program necessary to support receipt

Program Title	Milestone
	and storage of fuel on-site. Prior to fuel load for those elements of the RP Program necessary to support fuel load and plant operation Prior to first shipment of radioactive waste for those elements of the RP Program necessary to support shipment of radioactive waste.
Reactor Operator Training Program	18 months prior to scheduled fuel load.
Security Program – Physical Security Program	Prior to receipt of fuel on site.
Security Program- Safeguards Contingency Program	Prior to receipt of fuel on site.
Security Program – Training and Qualification Program	Prior to receipt of fuel on site.
Motor-Operated Valve Testing	Prior to initial fuel load.
Initial Test Program	Prior to the first construction test for the Construction Test Program. Prior to the first preoperational test for the Preoperational Test Program. Prior to initial fuel loading for the Startup Test Program.
Fitness for Duty Program – Construction Mgt & Oversight personnel	Prior to on site construction of safety or security related SSCs.
Fitness for Duty Program – Construction Workers & first Line Supv.	Prior to on site construction of safety or security related SSCs.
Fitness for Duty Program – Operations Phase Program	Prior to fuel receipt

PART 10 - APPENDIX A.1

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

A.1.1 Inspections, Tests, Analysis, and Acceptance Criteria

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

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Appendix A.1

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

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 is as shown on Figure A.1-1.	1.a An inspection of the as-built system will be performed.	1.a The as-built system conform to the functional arrangement as shown on Figure A.1-1.
1.b Each mechanical division of the system (Division A, B, C & D) is physically separated from the other divisions, except for the header portion of the transfer line piping.	1.b Inspections of the as-built system will be performed.	1.b Each mechanical division of the as-built system (Division A, B, C & D) is physically separated from the other divisions of the system by structural and/or fire barriers.
2.a The ASME Code Section III components, identified in Table A.1-2, are designed and constructed in accordance with ASME Code Section III requirements.	2.a An inspection will be conducted of the as-built components as documented in ASME design reports.	2.a The ASME Code Section III design reports exist and conclude that the as-built components identified in Table A.1-2 are reconciled with the design documents.
2.b The ASME Code Section III piping, identified in FSAR Table 3.2-201, is designed and constructed in accordance with ASME Code Section III requirements.	2.b An inspection will be conducted of the as-built piping as documented in ASME design reports.	2.b The ASME code Section III design reports exist and conclude that the as-built piping identified in FSAR Table 3.2-201 is reconciled with the design documents.
3.a Pressure boundary welds in ASME Code Section III components, identified in Table A.1-2, meet ASME Code Section III requirements.	3.a Inspections of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	3.a The ASME Code Section III requirements are met for non-destructive examination of the as-built pressure boundary welds.
3.b Pressure boundary welds in ASME Code Section III piping, identified in FSAR Table 3.2-201, meets ASME Code Section III requirements.	3.b Inspections of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	3.b The ASME Code Section III requirements are met for non-destructive examination of the as-built pressure boundary welds.

Table A.1-1 (Sheet 2 of 4)

**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
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 required by the ASME Code Section III to be hydrostatically tested.	4.a 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, 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 required by the ASME Code Section III to be hydrostatically tested.	4.b The results of the hydrostatic test of the as-built piping identified in FSAR Table 3.2-201 as ASME Code Section III conform to the requirements of the ASME Code Section III.
5.a The seismic category I equipment, identified in Table 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 seismic category I as-built equipment identified in Table A.1-2 is installed in the location identified in FSAR Table 3.2-201.	5.a.i The seismic category I as-built equipment identified in Table A.1-2 is installed in the location identified in FSAR Table 3.2-201.
	5.a.ii Type tests and/or analyses of the seismic category I equipment will be performed.	5.a.ii The results of the type tests and/or analyses conclude that the seismic category I equipment can withstand seismic design basis loads without loss of safety function.
	5.a.iii Inspections will be performed on the as-built equipment including anchorage.	5.a.iii The as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
5.b Each of the seismic category piping, identified in FSAR Table 3.2-201, is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	5.b Inspections will be performed on the as-built piping.	5.b Each of the as-built seismic category piping identified in FSAR Table 3.2-201 meets the seismic category requirements.

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Appendix A.1

Table A.1-1 (Sheet 3 of 4)

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.a The Class 1E components, identified in Table A.1-2, are powered from their respective Class 1E division.	6.a Tests will be performed on the as-built system by providing a simulated test signal in each Class 1E division.	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
6.b Separation is provided between Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.	6.b Inspections of the as-built Class 1E divisional cables and raceways will be conducted.	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.
7. The system provides adequate heat removal capability transferred design heat load from the ESWS.	7. Tests and analyses of the as-built system will be performed.	7. A report exists and concludes that the as-built system provides adequate heat removal capability transferred design heat load.
8. Controls exist 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 in Table A.1-2 using controls in the MCR.	8. Controls in the MCR operate to open and close the as-built remotely operated valves listed in Table A.1-2.
9.a The remotely operated valves, identified in Table A.1-2 to perform an active safety-related, function to change position as indicated in the table.	9.a.i Tests or type tests of the valves will be performed that demonstrate the capability of the valve to operate under its design conditions.	9.a.i Each valve changes position as indicated in Table A.1-2 under design conditions.
	9.a.ii Tests of the as-built valves will be performed under pre-operational flow, differential pressure, and temperature conditions.	9.a.ii Each as-built valve changes position as indicated in Table A.1-2 under pre-operational test conditions.

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

**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 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 using a simulated test signal.	9.b Upon the receipt of a simulated test signal, the as-built blowdown control valve closes automatically.
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 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 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 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 in Table A.1-3.
10.b The pump and fan identified in Table A.1-3 start after receiving a signal.	10.b Tests will be performed using simulated signal.	10.b The as-built pump and fan identified in Table A.1 -3 start after receiving simulated signal.
11. Displays of the parameters identified in Table A.1-3 can be retrieved in the MCR.	11. Inspections will be performed for retrievability of the system parameters in the as-built MCR.	11. The displays identified in Table A.1-3 can be retrieved in the as-built MCR.
12. Remote shutdown console (RSC) displays and/or controls provided for the system are identified in Table A.1-3.	12. Inspections will be performed on the as-built RSC displays and/or controls for the system.	12. Displays and/or controls exist on the as-built RSC as identified in Table A.1-3.
13. Each basin has a volume to satisfy the thirty day cooling water supply criteria.	13. Inspections will be performed to verify the as-built basins include sufficient volume of water.	13. The water volume of the each as-built basin is greater than or equal to 3.12×10^6 gallons.
14. The ultimate heat sink transfer 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.	14. The as-built system meets the design, and the analysis confirms that the NPSH available exceeds the required NPSH.

Table A.1-2

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	Loss of Motive Power Position
Ultimate heat sink transfer pumps	UHS-OPP-001 A, B, C, D	3	Yes	-	Yes/No	Start Stop	-
Ultimate heat sink cooling tower fans	UHS-OEQ-001 A, B, C, D, 002 A, B, C, D	-	Yes	-	Yes/No	Start Stop	-
Ultimate heat sink transfer pump discharge valves	UHS-MOV-503 A, B, C, D	3	Yes	Yes	Yes/No	Transfer Closed Transfer Open	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	As is
Ultimate heat sink basin blowdown control valves	ESW-HCV-2000,2001, 2002,2003	3	Yes	Yes	Yes/No	Transfer Closed	Closed
Ultimate heat sink basin water level	UHS-LT-2070A,B,2071 A,B,2072A,B,2073A,B	-	Yes	-	Yes/ No	-	-
Ultimate heat sink basin temperature	UHS-TE-2070,2071,2072,2073	-	Yes	-	Yes/ No	-	-

NOTE:
Dash (-) indicates not applicable.

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Appendix A.1

Table A.1-3

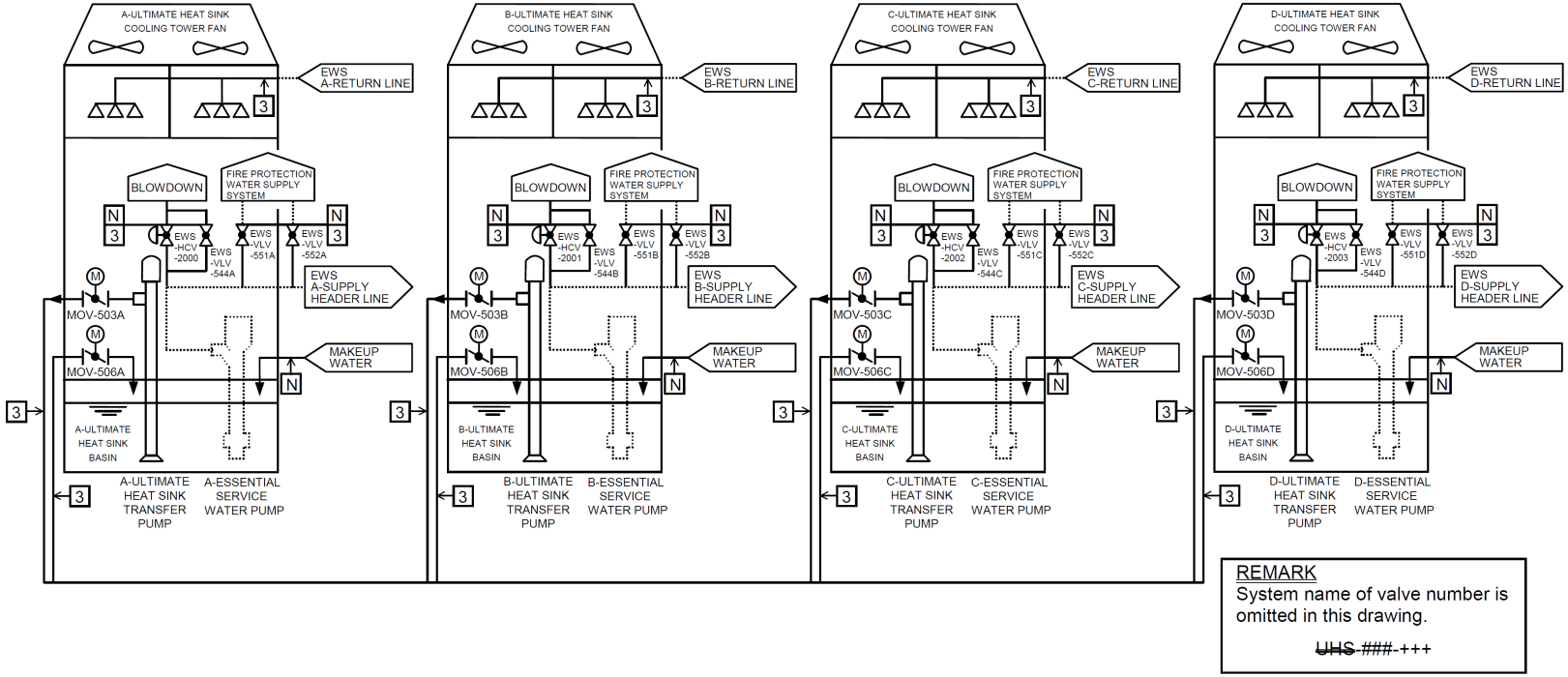
Ultimate Heat Sink System and Essential Service Water System (Portions Outside the Scope of the Certified Design) Equipment Alarms, Displays, and Control Functions

Equipment/Instrument Name	MCR Alarm	MCR Display	Control Function	RSC Display
Ultimate heat sink transfer pumps UHS-OPP-001A, B, C, D	No	Yes	Yes	Yes
Ultimate heat sink cooling tower fans UHS-OEQ-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	No	Yes	Yes	Yes
Ultimate heat sink basin water level UHS-LT-2070A, B, 2071 A, B, 2072A, B, 2073A, B	Yes	Yes	Yes	Yes
Essential Service Water basin water temperature UHS-TE-2070, 2071, 2072, 2073	Yes	Yes	Yes	Yes

Part 10 - ITAAC and Proposed License Conditions

Appendix A.1

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



PART 10 - APPENDIX A.2

UHS ESW PUMP HOUSE VENTILATION SYSTEM

A.2.1 Inspections, Tests, Analyses, and Acceptance Criteria

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

Appendix A.2

Table A.2-1 (Sheet 1 of 2)
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 shown on Figure A.2-1	1.a An 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 the functional arrangement as shown on 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.	1.b Inspections of the as-built UHE ESW pump house ventilation system will be performed.	1.b 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.
2. The seismic category I equipment, identified in Table A.2-2, is designed to withstand seismic design basis loads without loss of safety function.	2.a Inspections will be performed to verify that the as-built seismic category I equipment identified in Table A.2-2 is located in the UHS related structure.	2.a The as-built seismic category I equipment identified in Table A.2-2 is located in the UHS related structure.
	2.b Type tests and/or analyses of the seismic category I equipment will be performed.	2.b The result of the type tests and/or analyses concludes that the seismic category I equipment can withstand seismic design basis loads without loss of safety function.
	2.c Inspection will be performed on the as-built equipment including anchorage.	2.c The as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
3.a The Class 1E components, identified in Table A.2-2, are powered from their respective Class 1E division.	3.a A test will be performed on the as-built UHS ESW pump house ventilation system by providing a simulated test signal in each Class 1E division.	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.

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

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
3.b. Separation is provided between Class 1E divisions, and between Class 1E divisions 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.
4. The UHS ESW pump house ventilation system provides and maintains the proper environmental conditions within the respective room.	4. Tests of the as-built UHS ESW pump house ventilation system will be performed.	4. The as-built UHS ESW pump house ventilation system provides and maintains the proper environmental conditions within the respective room by the exhaust fan and/or unit heater operation.
5.a. Controls exist 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 in the as-built MCR operate to start and stop the as-built exhaust fan and unit heaters identified in Table A.2-3.
5.b. The UHS ESW pump house ventilation system exhaust fans and unit heaters units identified in Table A.2-3 start after receiving a signal.	5.b. Tests of the as-built UHS ESW pump house ventilation system exhaust fans and unit heaters 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.2-3 start after receiving a signal.
6. Displays of the UHS ESW pump house ventilation system parameters identified in Table A.2-3 can be retrieved in the MCR.	6. Inspections will be performed for retrievability of the as-built UHS ESW pump house ventilation system parameters in the as-built MCR.	6. The displays identified in Table A.2-3 can be retrieved in the as-built MCR.
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.	7. Inspections will be performed on the as-built RSC displays and/or controls for the as-built UHS ESW pump house ventilation system.	7. The displays and/or controls exist on the as-built RSC as identified in Table A.2-3.

Table A.2-2
UHS ESW Pump House Ventilation System 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	Loss of Motive Power Position
ESW Pump Room Exhaust Fan	VRS-OFN-601A,B,C,D	-	Yes	-	Yes/No	Start	-
UHS Transfer Pump Room Exhaust Fan	VRS-OFN-602A,B,C,D	-	Yes	-	Yes/No	Start	-
ESW Pump Room Unit Heater	VRS-OEQ-601A,B,C,D, VRS-OEQ-602A,B,C,D	-	Yes	-	Yes/No	Start	-
UHS Transfer Pump Room Unit Heater	VRS-OEQ-603A,B,C,D	-	Yes	-	Yes/No	Start	-

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

Equipment/Instrument Name	MCR Alarm	MCR Display	Control Function	RSC Display
ESW Pump Room Exhaust Fan (VRS-OFN-601A,B,C,D)	No	Yes	Yes	Yes
UHS Transfer Pump Room Exhaust Fan (VRS-OFN-602A,B,C,D)	No	Yes	Yes	Yes
ESW Pump Room Unit Heater (VRS-OEQ-601A,B,C,D, VRS-OEQ-602A,B,C,D)	No	Yes	Yes	Yes
UHS Transfer Pump Room Unit Heater (VRS-OEQ-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
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

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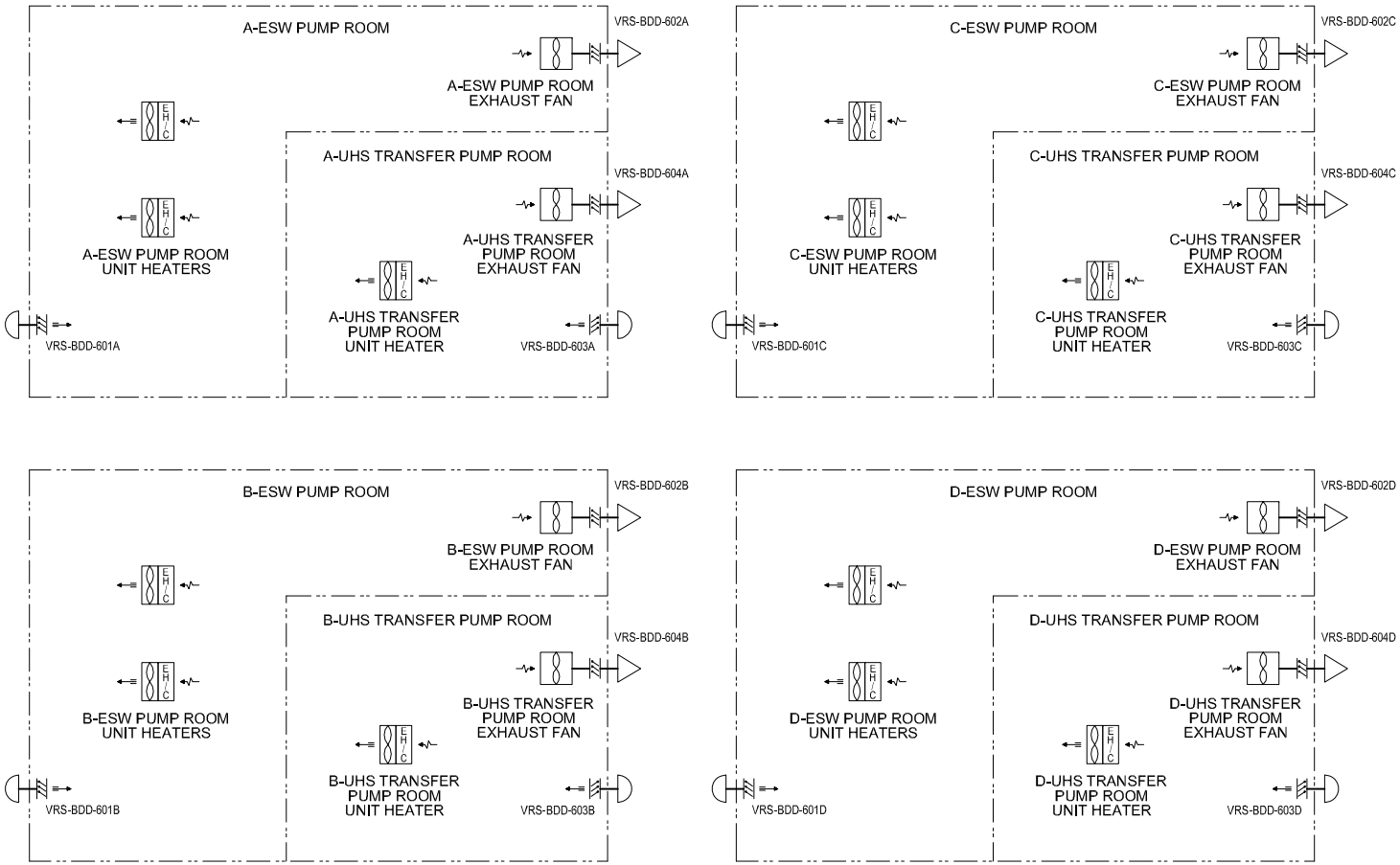
Appendix A.2

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



PART 10 - APPENDIX A.3

PLANT-SPECIFIC STRUCTURES

A.3.1 Inspections, Tests, Analyses, and Acceptance Criteria

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

Appendix A.3

Table A.3-1 (Sheet 1 of 2)

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 shown in FSAR Figures 3.8-201 through 3.8-214 and Table A.3-2.	1. Inspections of the as-built structural configurations of the UHSRS, ESWPT and PSFSV will be performed.	1. The as-built design configurations of the UHSRS, ESWPT and PSFSV are reconciled with descriptions in FSAR Figures 3.8-201 through 3.8-214 and Table A.3-2.
2.a Divisional flood barriers are provided in the UHSRS, ESWPT and PSFSV to protect against the internal and external flooding.	2.a An inspection will be performed to verify that the as-built divisional flood barriers exist in the UHSRS, ESWPT and PSFSV.	2.a The as-built divisional flood barriers exist at the appropriate locations in the UHSRS, ESWPT and PSFSV against the internal and external flooding.
2.b Water-tight doors are provided in the UHSRS, ESWPT and PSFSV to protect against the internal and external flooding.	2.b An inspection of the as-built water-tight doors will be performed.	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.
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.	3. An inspection of the as-built penetrations will be performed.	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.
4. For the UHSRS, ESWPT and PSFSV, external wall thickness below flood level is provided to protect against water seepage.	4. An inspection of the as-built external wall thickness for the UHSRS, ESWPT and PSFSV will be performed.	4. For the UHSRS, ESWPT and PSFSV, the as-built external walls below flood level are provided with adequate thickness to protect against water seepage.
5.a Flood barriers of the UHSRS, ESWPT and PSFSV are installed up to the finished plant grade level to protect against water seepage.	5.a An inspection of the as-built flood barriers will be performed.	5.a The as-built flood barriers are installed up to the finished plant grade level for the UHSRS, ESWPT and PSFSV to protect against water seepage.

Table A.3-1 (Sheet 2 of 2)

UHSRS, ESWPT and PSFSV Inspections, Tests, Analyses, and Acceptance Criteria

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
5.b Flood doors and flood barriers penetrations of the UHSRS, ESWPT and PSFSV are provided with flood protection features.	5.b Inspections of the as-built flood doors and flood penetrations will be performed.	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.
6. Penetrations in the external walls, including those up to the subgrade level if necessary, of the UHSRS, ESWPT and PSFSV are 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.	6. The as-built penetrations in the external walls of the UHSRS, ESWPT and PSFSV are provided with flood protection features below flood level.
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 of the as-built fire barriers will be performed.	7. The 3-hour rated as-built fire barriers are placed as required by the FHA.
8. All 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.	8. All as-built penetrations and openings are protected with rated components (i.e. fire doors in door openings, fire dampers in ventilation duct openings, and penetration seals).
9. UHRS, ESWPT and PSFSV are designed based on the structural design-basis loads.	9. 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. Design reports exist for the as-built UHRS, ESWPT and PSFSV are designed in accordance with structural design-basis loads.

Part 10 - ITAAC and Proposed License Conditions

Appendix A.3

Table A.3-2 (Sheet 1 of 3)

Definition of Wall Thicknesses for Safety-Related Structures: UHSRS

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Upper Cooling Tower Wall (East and West Walls)	-	From 846.00’ to 885.00’	2’-0”	No
Upper Cooling Tower Wall (North and South Walls)	-	From 824.00’ to 885.00’	2’-0”	No
Lower Cooling Tower Wall (North)	-	From 791.00’ to 824.00’	3’-0”	No
Cooling Tower Below Grade Wall (South)	-	From 791.00’ to 824.00’	4’-0”	No
Cooling Tower Below Grade Wall (East)	-	From 791.00’ to 846.00’	4’-0”	No
Basin Exterior Wall	-	From 791.00’ to 826.00’	4’-0”	No
Basin Interior Wall	-	From 791.00’ to 826.00’	3’-0”	No
Pump Room Upper Wall (North, South and West Walls)	-	From 828.00’ to 846.00’	2’-0”	No
Pump Room Upper Wall (East Wall)	-	From 828.00’ to 846.00’	3’-0”	No
Pump Room Lower Wall (North and East Walls)	-	From 779.00’ to 828.00’	3’-0”	No
Pump Room Lower Wall (South and West Walls)	-	From 779.00’ to 828.00’	4’-0”	No
Circular Wall at Fan	-	From 856.00’ to 863.00’	2’-0”	No
Mat Slab	-	791.00’	4’-0”	No
Floor and Roof Slabs	-	828.00’, 836.00’, 846.00’, 856.00’, 876.00’, 878.00’, 885.00’	2’-0”	No

NOTE:
Dash (-) indicates not applicable.

Table A.3-2 (Sheet 2 of 3)

Definition of Wall Thicknesses for Safety-Related Structures: ESWPT

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Outer Wall	-	From 793.08’ to 809.75’	2’-0”	No
Interior Wall	-	From 793.08’ to 809.75’	1’-0”	No
Roof Slab	-	809.75’	2’-0”	No
Mat Slab	-	793.08’	2’-0”	No

NOTE:
Dash (-) indicates not applicable.

Table A.3-2 (Sheet 3 of 3)

Definition of Wall Thicknesses for Safety-Related Structures: PSFSV

Wall or Section Description	Column Lines	Floor Elevation or Elevation Range	Concrete Thickness	Applicable Radiation Shielding Wall (Yes/No)
Exterior Wall (North)	-	From 788.50’ to 823.60’	2’-6”	No
Exterior Wall (South)	-	From 788.50’ to 822.00’	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

NOTE:
Dash (-) indicates not applicable.

PART 10 - APPENDIX A.4

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

A.4.1 Inspections, Tests, Analysis, and Acceptance Criteria

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

Part 10 - ITAAC and Proposed License Conditions

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, during steady-state operation, does 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.
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 The offsite circuits are isolated from the onsite Class 1E electrical system and components.
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 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.	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.

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 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 alarms and displays for monitoring the switchyard equipment status can be retrieved in the as-built MCR.
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 Switchyard agreement and protocols between the NPP and the TN system 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.
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.	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.

Part 10 - APPENDIX B.1

EMERGENCY PLANNING

Luminant has reviewed guidance provided in Regulatory Guide 1.206 concerning Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) related to emergency planning. Following this review, Luminant determined that specific ITAAC offered in the Regulatory Guide were not necessary for the CPNPP COLA. These ITAAC are identified in Table B-1. A few of the recommended ITAAC were addressed in the US-APWR DCD and are not repeated in the EP ITAAC, as noted in the table. In addition, the ITAAC related to submittal of procedures is omitted from the CPNPP COLA as discussed in the table.

Table B-2 specifies the inspections, tests, analyses, and associated acceptance criteria for the Emergency Plan.

Part 10 - ITAAC and Proposed License Conditions

Appendix B.1

Table B-1 (Sheet 1 of 1)

EP ITAAC Not Required in CPNPP COLA

CPNPP COLA EP ITAAC	SECY 05-0197 EP ITAAC	Reg. Guide 1.206 EP ITAAC	Discussion
None Specified	None Specified	1.1 2.1 8.3 – 8.6 9.5 – 9.6 10.2 – 10.4 11.1 – 11.4 12.1 - 12.3 15.1 16.1	Industry and NRC agreed to a set of generic EP ITAAC that were promulgated in SECY 05-0197. Additional EP ITAAC were included by the NRC staff in Regulatory Guide 1.206. In developing the set of EP ITAAC for the CPNPP COLA, the additional EP ITAAC from Reg. Guide 1.206 listed above were determined to be unnecessary because the Emergency Plan contains sufficient information on the content of future procedures to be written to implement the Emergency Plan and other EP ITAAC address topics the additional ITAAC offered in Reg. Guide 1.206. Accordingly, the CPNPP EP ITAAC do not include Reg. Guide 1.206 EP ITAAC 1.1, 2.1 8.3 through 8.6, 9.5, 9.6, 10.2 through 10.4, 11.1 through 11.4, 12.1 through 12.3, 15.1, and 16.1. This approach is consistent with the approach used on four other COLAs: Bellefonte, Lee, North Anna, and Grand Gulf.
1.1	1.1	4.1	
2.1 – 2.3	2.1 – 2.3	5.1 – 5.3	
3.1 – 3.2	3.1 – 3.2	6.1 – 6.2	3.1 and 3.2 are addressed in Design Commitments in the US-APWR DCD.
4.1	4.1	7.1	
5.1	5.1	8.1	5.1 is partially addressed through DCD Design Commitments for the TSC.
5.2	5.2	8.2	
6.1 – 6.4	6.1 – 6.4	9.1 – 9.4	
6.5 – 6.7	6.5 – 6.7	9.7 – 9.9	
7.1	7.1	10.1	
8.1	8.1	14.1	
None Specified	9.1	17.1	The regulatory requirement for submittal of emergency plan implementing procedures is explicit. Failure to comply with this regulation could delay fuel loading and could lead to NRC enforcement action. Accordingly, this ITAAC is not needed. This approach is consistent with the approach used on four other COLAs: Bellefonte, Lee, North Anna, and Grand Gulf.

Table B-2 (Sheet 1 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
1.0 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.	1.1 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.]	1.1 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 in Appendix 1, Section 5, of the Emergency Plan: **EALs in Emergency Plan Appendix 1, Section 5** Abnormal Rad Levels/Radiological Effluent: 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	1.1.1 A report exists that confirms 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. 1.1.2 A report exists that confirms 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**.

Table B-2 (Sheet 2 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
		1.1 (continued) 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	

Table B-2 (Sheet 3 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
2.0 Notification Methods and Procedures			
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	2.1 The means exist to notify responsible State and local organizations within 15 minutes after the licensee declares an emergency. [E.1]	2.1 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.	2.1 A report exists that confirms communications have been established via a dedicated circuit between the control room and the following: • Somervell County Sheriff or Dispatcher • Hood County Sheriff or Dispatcher • Texas Department of Public Safety
	2.2 The means exist to notify emergency response personnel. [E.2]	2.2 A test will be performed of the capabilities.	2.2 A report exists that confirms notification to mobilize CPNPP emergency response organization has been performed.
	2.3 The means exist to notify and provide instructions to the populace within the plume exposure EPZ. [E.6]	2.3 NOTE: The required test is included in Inspections, Tests, Analyses 8.1.	2.3 NOTE: The means to notify and provide instructions to the populace within the plume exposure pathway EPZ are addressed by Acceptance Criteria 8.1.1.2.

Table B-2 (Sheet 4 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
3.0 Emergency Communications			
10 CFR 50.47(b)(6) – Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.	3.1 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	3.1 NOTE: For communications among the control room, TSC ,EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Inspections, Tests, Analyses: • Table.2.7.6.10-1, Item #2 • Table 2.9-1, Item #7l	3.1 NOTE: For communications among the control room, TSC, EOF, principal State and local emergency operations centers, and radiological field assessment teams, Tier 1 of the US-APWR Design Control Document (DCD), Rev. 0, addresses the following Acceptance Criteria: • Table.2.7.6.10-1, Item #2 • Table 2.9-1, Item #7l

Table B-2 (Sheet 5 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	3.2 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 Commitments (DC): • Table.2.7.6.10-1, DC #3 • Table 2.10-1, DC #4	3.2 NOTE: For communications from the control room, TSC, and EOF to the NRC headquarters and regional 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, Analyses: • Table.2.7.6.10-1, DC #3 • Table 2.10-1, DC #4	3.2 NOTE: For communications from the control room, TSC, and EOF to the NRC headquarters and regional 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 Criteria: • Table.2.7.6.10-1, DC #3 • Table 2.10-1, DC #4

Table B-2 (Sheet 6 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
4.0 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.	4.1 The licensee has provided space which may be used for a limited number of the news media at the EOF. [G.3.b]	4.1 An inspection of the Joint Information Center will be performed to verify that space is provided for a limited number of the news media.	4.1 A report exists that confirms the Joint Information Center has been located in the Granbury City Hall at 116 W. Bridge Street, Granbury, TX.

Table B-2 (Sheet 7 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
5.0 Emergency Facilities and Equipment			
10 CFR 50.47(b)(8) – Adequate emergency facilities and equipment to support the emergency response are provided and maintained.	5.1 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, DCs #1, 2, 3	5.1.1 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 5.1.2 An inspection of the as-built OSC will be performed.	5.1.1 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 5.1.2.1 A report exists that confirms the OSC was in a location separate from the control room and TSC. 5.1.2.2 A report exists that confirms that OSC voice communication equipment is installed, and voice transmission and reception are accomplished.
	5.2 The licensee has established an emergency operations facility (EOF). [H.2]	5.2 An inspection of the EOF will be performed.	5.2.1 A report exists that confirms the EOF had at least 243 square meters (2,625 square feet).

Table B-2 (Sheet 8 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			5.2.2 A report exists that confirms 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
			5.2.3 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 #7l. • Table 2.10-1, Item #4

Table B-2 (Sheet 9 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
6.0 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.	6.1 The means exist to provide initial and continuing radiological assessment throughout the course of an accident. [I.2]	6.1 A test of the emergency plan will be conducted by performing an exercise or drill to verify the capability to perform radiological assessment.	6.1 A report exists 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.

Table B-2 (Sheet 10 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			6.1 (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.
	6.2 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]	6.2 An analysis of emergency plan implementing procedures will be performed.	6.2 A report exists that confirms a methodology has been established to determine source term of releases of radioactive materials within plant systems.

Table B-2 (Sheet 11 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	6.3 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]	6.3 An analysis of emergency plan implementing procedures will be performed.	6.3 A report exists that confirms a methodology has been provided to establish the relationship between effluent monitor readings, and onsite and offsite exposures and contamination for various meteorological conditions.
	6.4 The means exist to acquire and evaluate meteorological information. [I.5]	6.4 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)	6.4 A report exists that confirms the specified meteorological data was available at the control room, TSC, and EOF.
	6.5 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]	6.5 An analysis of emergency plan implementing procedures will be performed.	6.5 A report exists that confirms a methodology 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.

Table B-2 (Sheet 12 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
	6.6 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]	6.6 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.	6.6 A report exists that confirms instrumentation used for monitoring I-131 to detect airborne concentrations as low as 1E-07 microcuries per cubic centimeters has been provided.
	6.7 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]	6.7 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.	6.7 A report exists that confirms the means for relating contamination levels and airborne radioactivity levels to dose rates and gross radioactivity measurements for the specified isotopes has been established.

Table B-2 (Sheet 13 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
7.0 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.	7.1 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.	7.1 A test of the onsite warning and communications capability will be performed during a drill or exercise.	7.1.1 A report exists 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. 7.1.2 A report exists that confirms that, during a drill or exercise, audible warnings were provided to individuals outside the Protected Area, but within the Owner Controlled Area. 7.1.3 A report exists 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.

Table B-2 (Sheet 14 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
8.0 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.	8.1 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]	8.1 A full-participation exercise (test) will be conducted within the specified time periods of Appendix E to 10 CFR Part 50.	8.1.1.1 A report exists 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.
			8.1.1.2 A report exists that confirms exercise objectives, including specific 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

Table B-2 (Sheet 15 of 15)
Emergency Plan Inspections, Tests, Analyses, and Acceptance Criteria

Planning Standard	EP Program Elements	Inspections, Tests, Analyses	Acceptance Criteria
			8.1.2.1 A report exists that confirms onsite emergency response personnel were mobilized to fill emergency response positions and there were no uncorrected onsite exercise deficiencies. 8.1.2.2 A report exists that confirms onsite emergency response personnel performed their assigned responsibilities and there were no uncorrected onsite exercise deficiencies.

PART 10 - APPENDIX C

PHYSICAL SECURITY HARDWARE

C.1 Inspections, Tests, Analyses, and Acceptance Criteria

Table C-1 describes the inspections, tests analyses, and associated acceptance criteria for the site-specific physical security hardware.

Part 10 - ITAAC and Proposed License Conditions

Appendix C

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

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 Vital Area barrier.
2.b Penetrations through the protected area barrier must be secured and be capable of being 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.
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.	2.c Inspections will be performed of unattended openings of passable size within the protected area barriers.	2.c Unattended openings of a passable, (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
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 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.
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.	3.b Inspections of the part of the building that constitutes the protected area will be performed.	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.

Appendix C

Table C-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 2 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
4.a 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, (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 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.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.	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.
4.c Intrusion detection and assessment equipment at the protected area perimeter remains operable 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 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 abnormal presence or activity of persons or vehicles.	5. Inspections of the 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.
6.b The external walls, doors, ceiling and floors in the secondary alarm station and the last access control function for access to the protected area are bullet resistant.	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 , UL752 (2006) Level 4.

Appendix C

Table C-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 3 of 5)

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.	7. Inspections 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.
8.a Access control points are established to control personnel and vehicle access into the protected area.	8.a Tests, inspections, or 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.
8.b Access control points are established to detect firearms, explosives, and incendiary devices at the protected area personnel access points.	8.b Tests, inspections, or 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.
9. A security access control system with numbered picture badges is installed for use by individuals who are authorized access to protected areas without escort.	9. Tests of the access control system with numbered picture badges will be performed.	9. The access authorization system utilizes numbered picture badges, and authorizes protected area access only to those personnel with unescorted access authorization.
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 Security alarm annunciation and video assessment information are available concurrently in the secondary alarm station.	11.a-2 Tests, inspections or a combination of tests and inspections of alarm annunciation and video assessment equipment will be performed.	11.a-2 Security alarm annunciation and video assessment equipment information is available concurrently in the secondary alarm station.
11.b-2 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 Inspections of the secondary alarm station locations will be performed.	11.b-2 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.

Appendix C

Table C-1 Physical Security Hardware Inspections, Tests, Analyses, and Acceptance Criteria (Sheet 4 of 5)

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
11.c Central and secondary alarm stations are designed and equipped such that, in the event of a 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: (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 Tests, inspections or a combination of tests and inspections of the central and secondary alarm stations will be performed.	11.c Central and secondary alarm stations are designed, equipped and constructed such that , in the event of a 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: (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.d 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 Tests, inspections or a combination of tests and inspections of the central and secondary alarm stations will be performed.	11.d 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).
13.b-2 Intrusion detection and assessment systems are designed to provide visual display and audible annunciation in the secondary alarm station.	13.b-2 Tests will be performed on Intrusion detection and assessment systems.	13.b-2 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 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 and secured by locking devices that allow prompt egress during an emergency.

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

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
16.a-2 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 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 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.
16.b-2 The secondary alarm station is capable of continuous communication with security personnel.	16.b-2 Tests, inspections, or a combination of tests and inspections of the secondary alarm station continuous communication capabilities will be performed.	16.b-2 The secondary alarm station is capable of continuous communication with security officers, watchmen or armed response individuals, or other security personnel that have responsibilities during a contingency event.