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CP-200901681
Log # TXNB-09080

Ref. # 10 CFR 52

December 10, 2009

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555
ATTN: David B. Matthews, Director
Division of New Reactor Licensing

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT, UNITS 3 AND 4
DOCKET NUMBERS 52-034 AND 52-035
COMBINED LICENSE APPLICATION PART 10, ITAAC AND PROPOSED LICENSE CONDITIONS REVISION 1, UPDATE TRACKING REPORT REVISION 0

Dear Sir:

Luminant Generation Company LLC (Luminant) herein submits the first Update Tracking Report (UTR) for Part 10 of the Combined License (COL) Application for Comanche Peak Nuclear Power Plant Units 3 and 4, Revision 1. This UTR adds descriptions of site-specific systems, structures, and the offsite power system to Appendices A.1 through A.4 of Part 10.

Should you have any questions regarding this submittal, please contact Don Woodlan (254-897-6887, Donald.Woodlan@luminant.com) or me.

There are no commitments in this letter.

I state under penalty of perjury that the foregoing is true and correct.

Executed on December 10, 2009.

Sincerely,

Luminant Generation Company LLC

Donald R. Woodlan for

Rafael Flores

Attachment: COL Application Part 10, ITAAC and Proposed License Conditions Revision 1, Update Tracking Report Revision 0

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NRO

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Attachment 1

COL Application Part 10, ITAAC and Proposed License Conditions Revision 1, Update Tracking Report Revision 0

(This attachment includes marked-up COLA Part 10 pages 6, 7, 18, 19, 24, 25, 26, and 30. Because of text additions and deletions, the page numbers on the marked-up pages may not coincide with the page numbers in COLA Part 10 Revision 1.)

December 8, 2009

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

Part 10

ITAAC and Proposed License Conditions

Revision1

Update Tracking Report

Revision 0

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
-	11/13/2009	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

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)	1
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)	1
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"	1
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.	1
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	-
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	-

Change ID No.	Section	ITAAC Rev.1 Page	Reason for change	Change Summary	Rev. of T/R
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 7) Table A.1-3, Appendix A.2 Table A.2-1 (Sheet 2 of 2) Table A.2-3	14, 17, 21, 22, 23, 24	Response to RAI No.81 Luminant Letter no. TXNB-09065 on 11/13/2009	Table A.1-3 "MCR/RSC Control" entries Table A.2-1, ITAAC Item 6 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.	-

Change ID No.	Section	ITAAC Rev.1 Page	Reason for change	Change Summary	Rev. of T/R
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 (Sheet 7 of 7)	14	Response to RAI No.82 Luminant Letter no. TXNB-09065 on 11/13/2009	ITAAC Item 14 in ITAAC Table A.1-1 has been revised into two ITAACs (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	-

Change ID No.	Section	ITAAC Rev.1 Page	Reason for change	Change Summary	Rev. of T/R
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 (Sheet 2 of 2)	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	-
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	-

Change ID No.	Section	ITAAC Rev.1 Page	Reason for change	Change Summary	Rev. of T/R
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
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

PART 10 - APPENDIX A.1

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

RCOL2_14.0 3.07-28

A.1.1 Design Description

System Purpose and Functions

The ultimate heat sink system (UHSS) is a safety-related system that is provided to remove the heat transferred from the essential service water system (ESWS) during normal operation, transients, accidents and design basis events. It is used to support achieving and maintaining a safe shutdown condition. The ultimate heat sink (UHS) basin via the safety-related ESWS is also used as a highly reliable water source to provide water to the stand pipe header of the fire protection system. This assures manual fire suppression capability following a safe shutdown earthquake.

Location and Functional Arrangement

Figure A.1-1 shows the functional arrangement of the UHSS and ESWS (portions outside the scope of the certified design). FSAR Table 3.2-201 provides the classification and locations for equipment and piping. Table A.1-2 provides information on the design characteristics of equipment.

Key Design Features

The UHSS consists of 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. Each mechanical division of the system is physically separated from the other divisions, except for the header portion of the transfer line piping.

Seismic and ASME Code Classification

Table A.1-2 identifies the seismic classifications and the ASME Code Section III requirements for the UHSS components. FSAR Table 3.2-201 provides this information for system piping.

System Operation

The UHSS provides adequate removal of heat transferred from the ESWS during all operations. 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. During normal operation, the water losses due to evaporation, drift and blowdown are replenished with the

makeup water. In response to an emergency core cooling system (ECCS) actuation signal or low UHS basin water level, the blowdown control valves automatically close. The combined inventory of three UHS basins provides a thirty-day cooling water supply during a design basis accident without makeup for water lost. RCOL2_14.0 3.07-28

Alarms, Displays, and Controls

Table A.1-3 identifies alarms, displays, and controls associated with the UHSS and ESWS (portions outside the scope of the certified design) that are located in the main control room (MCR) and remote shutdown console (RSC).

Logic

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.

Interlocks

There are no interlocks needed for direct safety functions related to the UHSS and ESWS (portions outside the scope of the certified design).

Class 1E Electrical Power Sources and Divisions

The equipment identified in Table A.1-2 as Class 1E are powered from their respective Class 1E divisions, and separation is provided between each Class 1E division, and between Class 1E divisions and non-Class 1E cables.

Equipment to be Qualified for Harsh Environments

Not applicable

Interface with the Certified Design

A supply water temperature not exceeding 95 °F is required to provide sufficient cooling capability to the ESWS under the peak heat load condition. 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). The water level maintained in the UHSS basins assures that the net positive suction head available (NPSH) is greater than the ESWS pump's required NPSH.

Numeric Performance Values

Numeric performance values for selected components have been specified as ITAAC acceptance criteria in Table A.1-1 to demonstrate fulfillment of a design commitment.

PART 10 - APPENDIX A.2

UHS ESW PUMP HOUSE VENTILATION SYSTEM

A.2.1 Design Description

RCOL2_14.0 3.07-28

System Purpose and Functions

The UHS ESW pump house ventilation system provides and maintains the proper environmental conditions in the UHS ESW pump houses.

Location and Functional Arrangement

Figure A.2-1 shows the functional arrangement of the UHS ESW pump house ventilation system. The UHS ESW pump house ventilation system is located within the UHS related structure. Table A.2-2 provides information on the design characteristics of equipment.

Key Design Features

There are four separate and independent UHS ESW pump houses and each has its own ventilation system. Each ESW pump room is provided with one 100% capacity exhaust fan and two 50% capacity unit heaters. Each transfer pump room is provided with one 100% capacity exhaust fan and one 100% capacity unit heater. The UHS ESW pump house ventilation system is provided to maintain the proper environmental conditions during all plant operating, abnormal and accident conditions.

Seismic and ASME Code Classifications

The seismic classification for system components is identified in Table A.2-2. The system components are not designed or constructed to ASME Code Section III requirements.

System Operation

The UHS ESW pump house ventilation system provides and maintains the proper environmental conditions within the individual UHS ESW pump houses during all plant operating, abnormal and accident conditions.

Alarms, Displays, and Controls

Table A.2-3 identifies alarms, displays, and controls associated with the UHS ESW pump house ventilation system that are located in the MCR and RSC.

Logic

Upon receipt of a high temperature signal, each respective exhaust fan is actuated. Upon receipt of a low temperature signal, each respective unit heaters is actuated.

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Interlocks

There are no interlocks needed for direct safety functions related to the UHS ESW pump house ventilation system.

Class 1E Electrical Power Sources and Divisions

The equipment identified in Table A.2-2 as Class 1E are powered from their respective Class 1E divisions, and separation is provided between each Class 1E division, and between Class 1E divisions and non-Class 1E cable.

Equipment to be Qualified for Harsh Environments

Not applicable

Interface with the Certified Design

Not applicable

Numeric Performance Values

When necessary to demonstrate satisfaction of a design commitment, numeric performance values for selected components have been specified as ITAAC acceptance criteria in Table A.2-1.

A.2.2 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.

PART 10 - APPENDIX A.3

PLANT-SPECIFIC STRUCTURES

A.3.1 Design Description

RCOL2_14.0 3.07-28

The site-specific structures are comprised of the UHS related structures (UHSRS), essential service water pipe tunnel (ESWPT) and power source fuel storage vault (PSFSV), which are seismic Category I structures. The design descriptions of each building and structure are described herein.

The critical building dimensions are described in FSAR Figure 3.8-201. The definition of wall thicknesses, column line locations, floor elevations, and radiation shielding capability for the safety-related structures are provided in Table A.3-2 and FSAR Figure 3.8-202 through FSAR Figure 3.8-214.

The safety-related structures are designed and constructed to withstand design-basis loads as specified in the design description without loss of the ability to satisfy safety-related functions including maintaining structural integrity. The design basis loads are as follows:

- Normal plant operation (including dead loads, live loads, lateral earth pressure loads, and equipment loads, including 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 reinforced concrete 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 running north-south separates the two cell enclosures. The enclosures are an integral part of the UHS basin supported by the basin interior and exterior walls on the basemat foundation. A reinforced concrete wall, running eastwest, separates the cell enclosure portion of the basin from the rest of the UHS basin. An eastwest wall is provided with openings at the basemat to maintain the continuity of the

RCOL2_14.0 3.07-28

UHS basin. Air intakes serving the cooling towers are located at the north and south faces of the enclosure and configured to protect the safety-related substructures and components from tornado missiles. The north side cooling tower air intake is an integral part of the cooling tower enclosure, whereas the south side cooling tower air intake is an integral part of the ESWPT, which is supported by reinforced concrete piers. These piers are supported by the ESWPT walls and basemat.

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, running east-west, divides the pump house basin from the rest of the UHS basin. This wall is provided with slots for flow of water. Two baffle walls (running east-west) are provided inside the pump house basin, before the pump bay. These baffle walls are provided with slots to maintain the flow of water and are staggered to assure no line-of-sight pathways exist. This prevents 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 seismic Category I basins for each unit and each basin has one cooling tower with two cells. Each basin is square in shape, constructed of reinforced concrete and serves as a reservoir for the ESWS. There is a cementitious membrane adhered to the interior faces of the reinforced concrete walls of the basins which minimizes long term seepage of water from the basin. Two basins share a common foundation mat and a reinforced concrete wall divides them. An UHS ESW pump house is located at the south-west corner of each basin. Adjacent to the pump house on the east side of the basin are cooling tower enclosures supported by UHS basin walls. The ESWPT runs east-west along the south exterior wall of the UHS basin, and is separated by a minimum 4 inch expansion joint.

A.3.1.2 ESWPT

The ESWPT is an underground structure constructed with reinforced concrete, and is classified as seismic Category I. The tunnel is divided into two sections by a concrete wall. Each section contains both ESWS supply and return lines. The ESWPT structure starts at the UHS basins and terminates at the R/B. The ESWPT structure is isolated from other structures to prevent any seismic interaction. Access to the tunnel is provided by reinforced concrete manholes.

RCOL2_14.0 3.07-28

A.3.1.3 PSFSV

The PSFSVs are underground, seismic Category I, reinforced concrete structures, which house the safety-related and non safety-related fuel oil tanks. There is one vault for each PS/B. The vault contains three oil tanks, two safety-related and one non safety-related. Each tank is contained in a separate compartment. Compartments are separated by reinforced concrete walls. A common mat supports the tanks and the rest of the vault. 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.

Access to each vault is provided by a reinforced concrete tunnel from the applicable PS/B. Each tank compartment has a separate pipe/access tunnel, which is an integral part of the ESWPT.

A.3.2 Protection Against Hazards

A.3.2.1 External Flooding

Protection against external flooding is provided to preserve the safe shutdown capability. The external walls that are below flood level are of adequate thickness to protect against water seepage, and penetrations in the external walls below flood level are provided with flood protection features. Construction joints in the exterior walls and base mats are provided with water stops to prevent seepage of ground water. Additional protection is provided using a waterproofing system applied to below-grade surfaces.

A.3.2.2 Internal Flooding

Protection against internal flooding is provided to preserve the safe shutdown capability. Divisional flood barriers and water-tight doors are provided in the UHSRS, ESWPT and PSFSV to protect against the internal flooding. Penetrations in the divisional walls of the UHSRS, ESWPT and PSFSV, except for water-tight doors, are sealed up to the internal flooding levels.

A.3.2.3 Fire Barriers

Redundant safe shutdown components and associated electrical divisions outside the containment and the control room complex are separated by 3-hour rated fire barriers to preserve the capability to safely shut down the plant following a fire. The 3-hour rated fire barriers are placed as required by the fire hazard analysis (FHA). All penetrations and openings through the fire barriers are protected with 3-hour rated components (i.e. fire doors in door openings, fire dampers in ventilation duct openings, and penetration seals).

PART 10 - APPENDIX A.4
OFFSITE POWER SYSTEM (PORTIONS OUTSIDE THE SCOPE OF THE CERTIFIED DESIGN)

A.4.1 Design Description

RCOL2_14.0 3.07-28

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).

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

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

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

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

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

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

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

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.

The Switchyard agreement and protocols between CPNPP 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.

The 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.4.2 Inspections, Tests, Analyses, 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.