

PMComanchePeakPEm Resource

From: Woodlan, Don [Donald.Woodlan@luminant.com]
Sent: Monday, August 08, 2011 12:44 PM
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Subject: 2011-08-08 Woodlan, Luminant Slides for 8-17-2011 ACRS Subcommittee re CPNPP Ch 8 and 10
Attachments: 2011-08-08 R-COLA Chapter 10.pptx; 2011-08-08 R-COLA Chapter 8 ACRS (Luminant) Slides 08-04-11.pptx

Please find attached the slides that Luminant intends to use for the August 17, 2011, ACRS Subcommittee meeting regarding the review of Chapters 8 and 10 of the Luminant COL application for Comanche Peak.

Donald R. Woodlan

Manager, Nuclear Regulatory Affairs

Luminant Power

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LUMINANT GENERATION COMPANY

Comanche Peak Nuclear Power Plant, Units 3 and 4

ACRS US-APWR Subcommittee



**FSAR Chapter 10 – Steam and
Power Conversion System**

August 17, 2011



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Agenda

- ☐ **Introduction**
- ☐ **Subsection by Subsection Discussion**
 - **FSAR Summary – COL Items, departures**
 - **SER Summary – Open Items, Confirmatory Items, proposed License Conditions**
 - **Site-specific aspects**
- ☐ **Summary**



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Introduction

- ☐ **FSAR uses “Incorporated by Reference” methodology**
- ☐ **No departures from US-APWR DCD**
- ☐ **No SER Open or Confirmatory Items**
- ☐ **One proposed License Condition**
- ☐ **No contentions pending before ASLB**



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10.1 Summary Description

□ CPNPP FSAR Summary

- **US-APWR DCD incorporated by reference**
- **No departures or supplements**
- **No COL Information Items**

□ NRC SER Summary

- **No Open Items or Confirmatory Items**
- **No proposed License Conditions**



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10.2 Turbine-Generator (T/G)

□ CPNPP FSAR Summary

- **US-APWR DCD incorporated by reference**
- **No departures**
- **One COL Information Item – addressed in FSAR**

□ NRC SER Summary

- **No Open Items or Confirmatory Items**
- **One proposed License Condition – T/G inspection program**



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10.3 Main Steam Supply System

□ CPNPP FSAR Summary

- **US-APWR DCD incorporated by reference**
- **No departures**
- **Two COL Information Items – both addressed in FSAR**

□ NRC SER Summary

- **No Open Items or Confirmatory Items**
- **No proposed License Conditions**



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10.3 Main Steam Supply System (cont'd)

□ Site-Specific Aspects

■ Flow-Accelerated Corrosion Monitoring Program

- Addresses GL 89-08
- Consistent with NSAC-202L-R2
- Will be established before fuel load with governing procedure and implementing procedures
- Will be updated periodically to include industry experience



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10.4 Other Features of Steam and Power Conversion System

❑ CPNPP FSAR Summary

- **US-APWR DCD incorporated by reference**
- **No departures**
- **Four COL Information Items – all addressed in FSAR**

❑ NRC SER Summary

- **No Open Items or Confirmatory Items**
- **No proposed License Conditions**



10.4 Other Features (cont'd)

□ Site-Specific Aspects

■ Circulating Water System

- Makeup/blowdown from/to Lake Granbury 7 miles away
- Makeup water intake structure screens limit intake velocity to 0.5 fps
- Two 50% makeup water pumps per unit and common spare housed in makeup water intake structure
- Blowdown by gravity drain with priming pump available
- Blowdown treated by filtration, reverse osmosis, and evaporation as necessary to meet water permit



10.4 Other Features (cont'd)

□ Site-Specific Aspects (cont'd)

■ SG Blowdown System

- Startup BD rate is ~3% MSR
- Normal operation BD rate is $\leq 1\%$ MSR
- Rad monitor downstream of SGBD HX
- Cooled BD goes to existing waste management pond
- Single-wall stainless and double-wall carbon piping used in different parts of system (RG 4.21)



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Summary

- ☐ **US-APWR DCD incorporated by reference**
- ☐ **No departures**
- ☐ **All COL Information Items addressed in FSAR Chapter 10**
- ☐ **No SER Open Items or Confirmatory Items**
- ☐ **One proposed License Condition**



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Acronyms

<input type="checkbox"/> ASLB	Atomic Safety and Licensing Board
<input type="checkbox"/> COLA	Combined License Application
<input type="checkbox"/> CPNPP	Comanche Peak Nuclear Power Plant
<input type="checkbox"/> CWS	Circulating Water System
<input type="checkbox"/> DCD	Design Control Document
<input type="checkbox"/> FSAR	Final Safety Analysis Report
<input type="checkbox"/> HX	Heat Exchanger
<input type="checkbox"/> MSR	Maximum Steaming Rate
<input type="checkbox"/> R-COLA	Reference COLA
<input type="checkbox"/> RG	Regulatory Guide
<input type="checkbox"/> SER	Safety Evaluation Report
<input type="checkbox"/> SGBD	Steam Generator Blowdown



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Comanche Peak Nuclear Power Plant, Units 3 and 4

ACRS, US-APWR Subcommittee



FSAR Chapter 8 – Electric Power

August 17, 2011



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Agenda – FSAR Chapter 8, Electric Power

- ☐ **Introduction**
- ☐ **Subsection by Subsection Discussion**
 - ☐ **FSAR Summary – Site Specific Design, COL Items, Departures**
 - ☐ **SER Summary – Open Items, Confirmatory Items, Proposed License Conditions**
- ☐ **Summary**



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Introduction

- ☐ **R-COLA authored using “Incorporated by Reference” methodology**
- ☐ **CPNPP COLA FSAR Chapter 8 takes no departures from the US-APWR DCD**
- ☐ **All site-specific SER Open Items have been addressed**
- ☐ **All site-specific Confirmatory Items have been addressed and are in FSAR Revision 2 submitted in June 2011**
- ☐ **COLA Revision 3 is scheduled for June 2012**
- ☐ **No contentions pending before ASLB**



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8.1 Introduction

❑ CPNPP COLA FSAR Summary

- **US-APWR DCD Incorporated by Reference**
- **No departures or supplements**
- **No COL Information Items**

❑ NRC SER Summary

- **1 site-specific SER Open Item (08.01-1) related to effects of shared electrical equipment between plants on safe shutdown**
- **No Confirmatory Items**
- **No proposed License Conditions**



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08.01-1 Sharing of SSCs (Open Item)

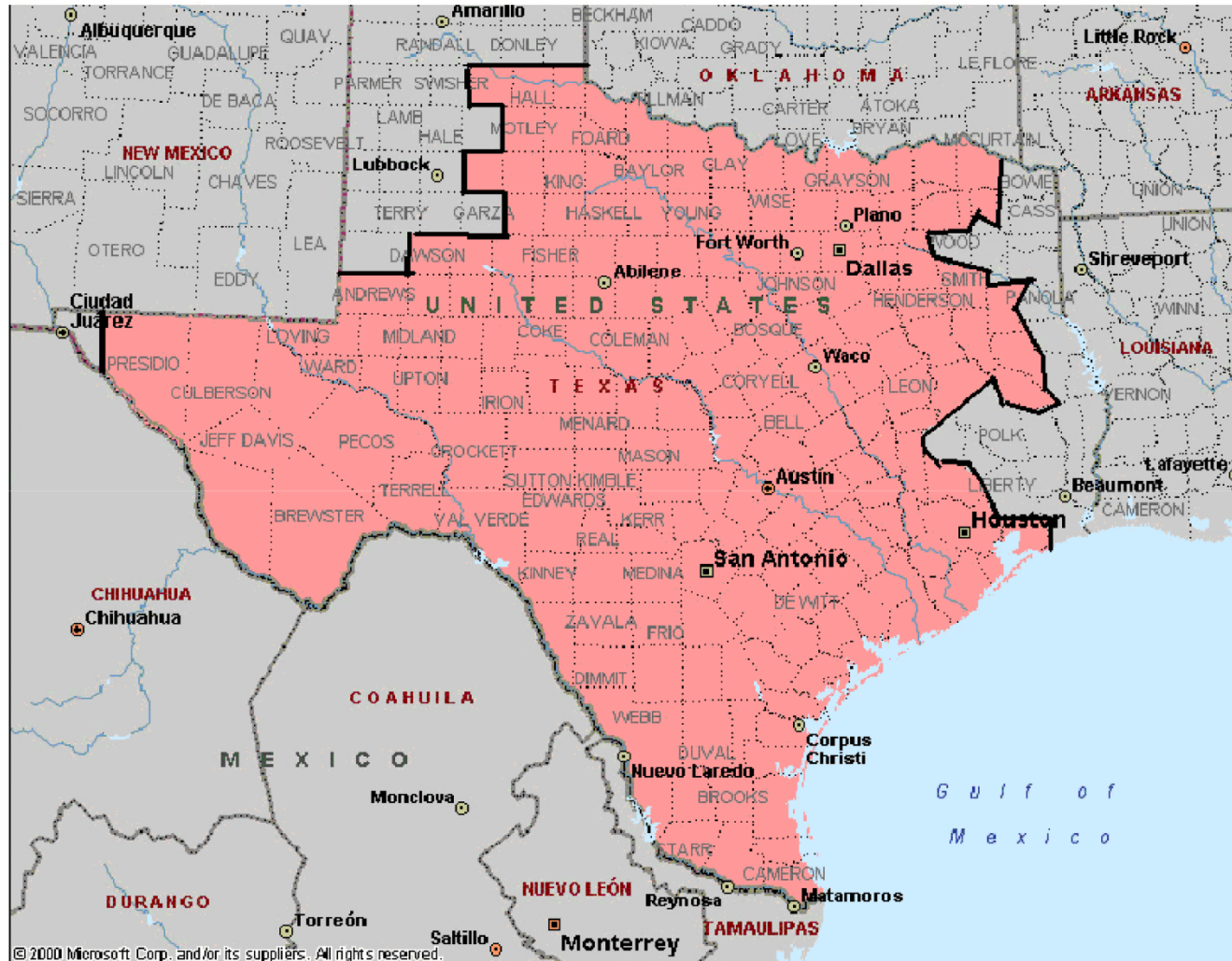
- ❑ **Open Item 08.01-1 related to CP RAI 9 (RAI 2576) Question 08.01-2**
 - **“However, the applicant has not demonstrated whether or not the SSCs important to safety that are shared among nuclear power units will not significantly impair their ability to perform their safety functions, including an accident in one unit, and orderly shutdown and cooldown of the remaining units.”**
 - **Luminant has recently submitted supplemental information to address this Open Item and the response is under NRC Staff review.**



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8.2 Offsite Power System

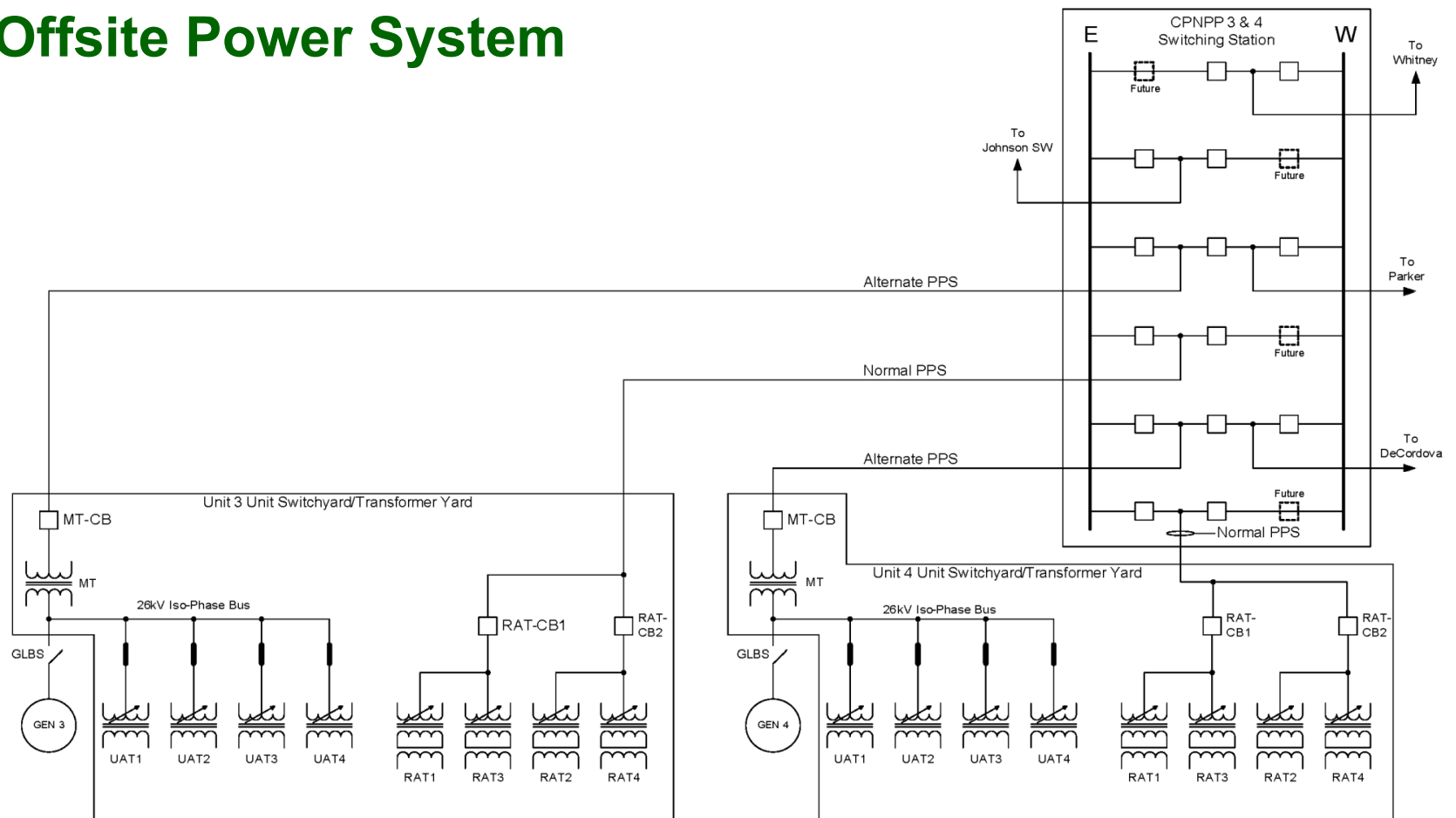




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8.2 Offsite Power System





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8.2 Offsite Power System

❑ CPNPP COLA FSAR Summary

- **US-APWR DCD Incorporated by Reference**
- **No departures**
- **Nine COL Information Items**

❑ NRC SER Summary

- **1 SER Open Item (08.02-1) related to anti-motoring time delay**
- **Three Confirmatory Items**
- **No proposed License Conditions**



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08.02-1 Anti-motoring time delay (Open Item)

- ❑ **Open Item 08.02-1, related to CP RAI 182 (RAI 5116) Question 08.02-30 and DCD RAI 687 (RAI 5394) Question 15.0.0-24**
 - **“Inconsistency between the DCD chapter 15 language related to anti-monitoring protective relaying for main generator output breaker.”**
 - **The Staff is working on resolution with the DCD applicant, once a resolution is reached, Luminant will either confirm or revise its response to question 08.02-30.**



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8.3 Onsite Power Systems

❑ CPNPP COLA FSAR Summary

- **US-APWR DCD Incorporated by Reference**
- **No departures**
- **Seven COL Information Items**

❑ NRC SER Summary

- **No SER Open Items**
- **One Confirmatory Item**
- **No proposed License Conditions**



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8.4 Station Blackout

- ❑ **CPNPP COLA FSAR Summary**
 - **US-APWR DCD Incorporated by Reference**
 - **No departures**
 - **No COL Information Items**
- ❑ **NRC SER Summary**
 - **No SER Open Items**
 - **One Confirmatory Item**
 - **No proposed License Conditions**



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Summary

- ☐ **COL Information Items are addressed in FSAR Chapter 8**
- ☐ **No departures**
- ☐ **All site-specific SER Open Items have been addressed**
- ☐ **All RAI responses associated with site-specific confirmatory items were addressed in COLA Revision 2**
- ☐ **No proposed license conditions**



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Acronyms

<input type="checkbox"/> ACRS	Advisory Committee on Reactor Safeguards
<input type="checkbox"/> ASLB	Atomic Safety and Licensing Board
<input type="checkbox"/> COL	Combined license
<input type="checkbox"/> COLA	COL application
<input type="checkbox"/> CPNPP	Comanche Peak Nuclear Power Plant
<input type="checkbox"/> DCD	Design control document
<input type="checkbox"/> FSAR	Final Safety Analysis Report
<input type="checkbox"/> LC	License condition
<input type="checkbox"/> OI	Open item
<input type="checkbox"/> RAI	Request for Additional Information
<input type="checkbox"/> R-COLA	Reference COLA
<input type="checkbox"/> SER	Safety Evaluation Report