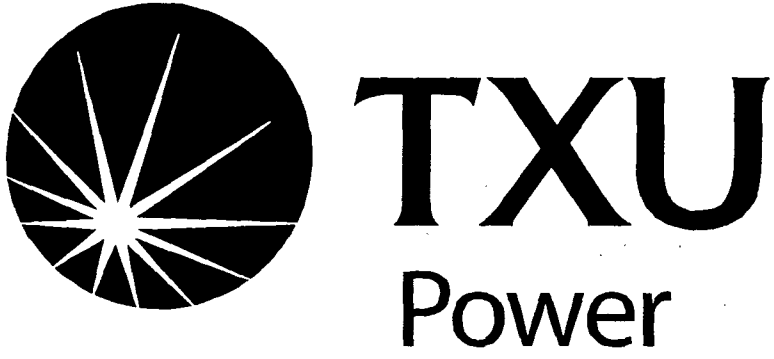
Enclosure 2

Comanche Peak SES Transition to Westinghouse Safety Analysis Methodologies



May 23, 2007

Enclosure 2

CPSES Stretch Power Uprate

TXU Power

Purpose of meeting is to inform the NRC of our plans & schedule to facilitate resource allocation by the NRC

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CPSES Stretch Power Uprate

TXU Power

Meeting Agenda

- **CPSES Uprate History**
- **Project team**
- **Project objectives, milestones & overview**
- **NSSS analyses**
- **BOP analyses**
- **Plant modifications**
- **Testing**
- **Submittal format**
- **Active & planned licensing submittals**
- **Summary and Q&A**

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Methodology Transition Project - What and Why?

TXU Power

Prior to 2006:

- TXU Power's Core Design & Safety Analysis organizations performed FSAR Chapter 4, 6, 7 and 15 analyses in-house, using vendor-independent methods

May of 2006:

- TXU Power transferred in-house Core Design & Safety Analysis and Risk & Reliability functions to Westinghouse Electric Co.
- Teaming arrangement developed, where Westinghouse performs these functions in the best interests of Comanche Peak
- Agreement includes application of latest NRC-approved Westinghouse analysis methodologies
  - Allows power uprates, longer cycles, more efficient core designs, newer technologies for more efficient plant operation

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Agenda

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- Purpose of today's discussions
- Overview of the Accident Analysis Methodology Transition Project
- Specifics of Technical Specification Changes
  - Generic, enabling changes
    - Submitted for NRC review April 10, 2007
  - Conforming changes
    - Submitted for NRC review April 10, 2007
  - Cycle Specific Applications
    - To be submitted upon completion of analyses
- Licensing Action Submittal Schedules
- Concluding discussions

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Project Objectives

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- Increase Rated Thermal Power from 3458 to 3612 MWt (~4.5%)
- Increase plant output
  - Unit 1 49 MWe
  - Unit 2 37 MWe
- Design and operating margin will be protected to assure continued safe and reliable plant operation
  - Modifications
  - Analyses

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Project Milestones

TXU Power

- August 2007 – LAR submittal to NRC (Units 1 & 2)
- Fall 2008 Outage – Unit 1 uprate implementation
- Fall 2009 Outage – Unit 2 uprate implementation

NRC approval of proposed Uprate LAR requested to support the Fall 2008 Unit 1 outage

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Methodology Transition Project Overview

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•All adopted Westinghouse methodologies have been previously approved by the NRC on a generic basis for application at plants such as Comanche Peak

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Required Tech Spec Changes – enabling changes

TXU Power

•Tech Spec 5.6.5b, "Core Operating Limits"

•List of Methodologies used to establish Core Operating Limits expanded to include standard Westinghouse Methodologies

- WCAP-11397-P-A, "Revised Thermal Design Procedure," April 1989.
- WCAP-8745-P-A, "Design Bases for the Thermal Overpower ΔT and Thermal Overtemperature ΔT Trip Functions," September 1986.
  - Applicable to Comanche Peak's N-16-based OT/OP system
- WCAP-14565-P-A, "VIPRE-01 Modeling and Qualification for Pressurized Water Reactor Non-LOCA Thermal-Hydraulic Safety Analysis," October 1999.
- WCAP-12472-P-A, "BEACON Core Monitoring and Operations Support System," August 1994.

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NSSS Analyses - continued

TXU Power

- Component Evaluations
- System Evaluations
- Safety analyses include:
  - LOCA M&E / containment
  - SLB M&E / containment
  - Spent fuel pool criticality
  - Non-LOCA analyses
  - LB BELOCA w/ASTRUM (1)
  - SBLOCA (1)

(1) Addressed in Transition to Westinghouse Methodologies

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NSSS Uprate Modifications

TXU Power

Nuclear Steam Supply System (NSSS)

- NSSS Control System changes
  - Steam Dump Control System
  - Rod Control System
  - SG Level Control System
  - Pressurizer Water Level Control System

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Required Tech Spec Changes – conforming changes

TXU Power

•BEACON-TSM

- Replace the phrase "moveable incore detectors" to "core power distribution measurement information"
- Replace the phrase "flux map" to "power distribution measurements"
- Affects:
  - TS 3.1.7, "Rod Position Indication"
  - TS 3.2.1, "Heat Flux Hot Channel Factor"
  - TS 3.2.2, "Nuclear Enthalpy Rise Hot Channel Factor"
  - TS 3.2.4, "Quadrant Power Tilt Ratio"
  - TS 3.3.1, "Reactor Trip System (RTS) Instrumentation."

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Required Tech Spec Changes – cycle-specific applications

TXU Power

•Tech Spec changes identified as cycle-specific analyses are completed

•Cycle-specific analyses are performed to bound operation at current Rated Thermal Power as well as planned uprated power

- Current Rated Thermal Power = 3458 MWth
- Planned Rated Thermal Power = 3612 MWth

•Permission to operate at uprated power is NOT part of this project

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Power Ascension Testing

TXU Power

- Plant transient testing under evaluation
- NSSS & BOP systems - monitoring during uprate power ascension
- Flow-induced vibration monitoring of the following systems
  - Main Steam, Feedwater (outside of containment)
  - Condensate / Heater Drains
  - Extraction Steam
- Post-Modification Testing, including
  - Heater Drain pump / system
  - Isophase bus duct cooling
- Turbine Thermal Performance Testing

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Submittal Format & Content

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- RS-001 EPU standard used to facilitate NRC review
- Recent NRC RAIs addressed
- Current licensing basis summarized
- Uses Westinghouse, Shaw, & Siemens uprate experience

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Schedules

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Mid-April 2008	First application of Westinghouse methodologies to Unit 2 Cycle 11
	NRC Approval Requested 2/15/08

Supporting Milestones:

April 2007	Submitted Enabling & Conforming Tech Spec changes
July 2007	Submit SBLOCA & ASTRUM Evaluation Models
September 2007	Submit cycle-specific Tech Spec changes required to support methodology transition

- RTS & ESFAS Allowable Values
  - affected functions only
- Pressurizer Safety Valve set pressure and as-found tolerance

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General Discussion

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Any Comments or Questions?

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Summary

TXU Power

- CPSES SPU will result in ~4.5% increase in RTP
- Dedicated, experienced project team
- Similar approach to other recent Westinghouse 4 loop SPU projects
- Design and operating margin will be protected to assure continued safe and reliable plant operation
- RS-001 EPU standard used to facilitate NRC review

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Summary

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Project Milestones

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Questions?

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