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Ref: 10CFR50.73(a)(2)(i)(B)

CPSES-200402077
Log # TXX-04142

September 23, 2004

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NO. 50-445
CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS
LICENSEE EVENT REPORT 445/04-003-00**

Gentlemen:

Enclosed is Licensee Event Report (LER) 04-003-00 for Comanche Peak Steam Electric Station Unit 1, "Reactor Coolant System Leakage Detection Instrumentation Inoperable for Intermittent Periods Due to a Design Related Siphoning Condition."

This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2.

IE22

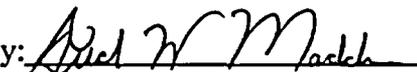
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Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,
Its General Partner

Mike Blevins

By: 
Fred W. Madden
Director, Regulatory Affairs

GLM

Enclosures

c - B. S. Mallett, Region IV
W. D. Johnson, Region IV
M. C. Thadani, NRR
Resident Inspectors, CPSES

LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Facility Name (1) COMANCHE PEAK STEAM ELECTRIC STATION UNIT 1	Docket Number (2) 05000445	Page (3) 1 OF 6
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Title (4)
CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS

Event Date (5)			LER Number (6)			Report Date (7)			Other Facilities Involved (8)	
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Name	Docket Numbers
07	26	04	04	003	00	09	23	04	N/A	05000

Operating Mode (9)	1	This report is submitted pursuant to the requirements of 10 CFR : (Check all that apply) (11)			
Power Level (10)	100	20.2201(b)	20.2203(a)(3)(i)	50.73(a)(2)(i)(C)	50.73(a)(2)(vii)
		20.2201(d)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(A)
		20.2203(a)(1)	20.2203(a)(4)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(B)
		20.2203(a)(2)(i)	50.36(c)(2)(i)(A)	50.73(a)(2)(iii)	50.73(a)(2)(ix)(A)
		20.2203(a)(2)(ii)	50.36(c)(1)(ii)(A)	50.73(a)(2)(iv)(A)	50.72(a)(2)(x)
		20.2203(a)(2)(iii)	50.36(c)(2)	50.73(a)(2)(v)(A)	73.71(a)(4)
		20.2203(a)(2)(iv)	50.46(a)(3)(ii)	50.73(a)(2)(v)(B)	73.71(a)(5)
		20.2203(a)(2)(v)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(C)	OTHER
20.2203(a)(2)(vi)	X 50.73(a)(2)(i)(B)	50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A		

Licensee Contact For This LER (12)		Telephone Number (Include Area Code)	
Name Timothy Hope - Regulatory Performance Manager		254-897-6370	

Complete One Line For Each Component Failure Described in This Report (13)										
Cause	System	Component	Manufacturer	Reportable To EPIX	Cause	System	Component	Manufacturer	Reportable To EPIX	
				N						
Supplemental Report Expected (14)							EXPECTED SUBMISSION DATE (15)	Month	Day	Year
YES (If YES, complete EXPECTED SUBMISSION DATE)				X	NO					

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On July 26, 2004, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1 operating at 100 percent power. At 1449 hours, it was determined that the Unit 1 Containment Sump Level and Flow Monitoring System had been inoperable in the past due to a design related siphoning condition for a time period greater than the time allowed to complete the Required Actions of the applicable Technical Specification.

TXU Generation Company LP (TXU Power) has determined that the cause of this event was a siphoning condition that was inherent in the original design of the system. Corrective actions include the installation of vacuum breakers in the containment sump discharge piping to break the siphoning condition.

All times in this report are approximate and Central Standard Time unless noted otherwise.

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NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

I. DESCRIPTION OF REPORTABLE EVENT**A. REPORTABLE EVENT CLASSIFICATION**

Any operation or condition which was prohibited by the plant's Technical Specifications.

B. PLANT OPERATING CONDITIONS PRIOR TO THE EVENT

On July 26, 2004, Comanche Peak Steam Electric Station (CPSES) Unit 1 was in Mode 1 operating at 100 percent power.

C. STATUS OF STRUCTURES, SYSTEMS, OR COMPONENTS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

There were no inoperable structures, systems, or components that contributed to the event.

D. NARRATIVE SUMMARY OF THE EVENT, INCLUDING DATES AND APPROXIMATE TIMES

On June 11, 2004, Operations personnel (utility, licensed) observed that the containment sump flow counter [EIS:(CTR)] did not indicate flow when containment sump pump 4 ran to pump down containment sump 2. At CPSES, containment leakage is collected in containment sump 1, containment sump 2, or the reactor cavity sump [EIS:(WK)(SUMP)] and is pumped via a common discharge header to a floor drain tank [EIS:(WK)(TK)] or a waste hold-up tank [EIS:(WK)(TK)]. The common discharge header contains a flow totalizer [EIS:(FQI)] that measures flow and facilitates the recording of this total flow in the control room. Additionally, a run time counter [EIS:(CTR)] records the run time of each pump. When the water level in the sump reaches a low level, the sump pumps [EIS:(NH)(SUMP)(P)] are designed to shutoff.

Subsequent troubleshooting revealed that system elevation differences were causing the drain header to siphon intermittently to the floor drain tank leaving a void in the piping. When the sump pump was subsequently run, the water would fill the piping resulting in minimal flow registering on the flow totalizer. The siphoning condition would occur after the pump was secured from the normal pump run resulting in the flow totalizer continuing to indicate flow.

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At 2350 hours on June 11, 2004, the Containment Sump Level and Flow Monitoring System [EIS:(IJ)(MON)] was declared inoperable. At 2300 hours on June 25, 2004, vacuum breakers [EIS:(VACB)] were installed in the discharge piping and the Unit 1 Containment Sump Level and Flow Monitoring System was restored to operable status.

A review was performed to determine if the Unit 1 Containment Sump Level and Flow Monitoring system had been inoperable in the past for a time period greater than allowed by TS 3.4.15. Condition A of TS 3.4.15 requires that if the Containment Sump Level and Flow Monitoring System is inoperable, a Reactor Coolant System [EIS: (AB)] water inventory balance must be performed within 24 hours (Condition A.1) and the Containment Sump Level and Flow Monitoring System must be restored to operable status within 30 days (Condition A.2). If Condition A is not met, Condition D.1 applies which requires the plant to be in Mode 3 within the following 6 hours.

At 1449 hours on July 26, 2004, Engineering personnel (utility, non-licensed) concluded that the Unit 1 Containment Sump Level and Flow Monitoring system had been inoperable on December 15, 2003, for approximately 31 hours. Since the required Reactor Coolant System water inventory balance was not performed and Unit 1 was not placed in Mode 3 within 30 hours (24 hours for condition A.1 plus 6 hours for Condition D.1) on December 15, 2003, as required by TS 3.4.15, this condition is reportable as a condition prohibited by TS.

The Containment Sump Level and Flow Monitoring system at CPSES uses a series of level switches, a timer, and an alarm. To be considered operable per TS, the system must be capable of detecting a one gallon per minute (gpm) leakage increase within one hour. Engineering's review determined that the system is capable of detecting a one gpm leakage increase within one hour provided that the sump water level is not within an approximate ½ inch band above the Timer Start set point. When the sump water level was within the ½ inch band, the estimated time to detect a one gpm leakage increase was approximately 64 minutes. At all other water levels the system is operable because it would have detected a one gpm leakage increase within one hour. Therefore, the Unit 1 Containment Sump Level and Flow Monitoring system has not been inoperable continuously since initial licensing, rather, it has only been inoperable at intermittent periods in the past as described above.

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TXU Power believes that the higher amount of containment leakage in the past contributed to masking the siphoning condition, and that recent measures taken to reduce containment leakage facilitated observing the siphoning condition.

E. THE METHOD OF DISCOVERY OF EACH COMPONENT OR SYSTEM FAILURE, OR PROCEDURAL OR PERSONNEL ERROR

At 1449 hours on July 26, 2004, Engineering personnel (utility, non-licensed) determined that the Containment Sump Level and Flow Monitoring System had been inoperable on December 15, 2003, for approximately 31 hours.

II. COMPONENT OR SYSTEM FAILURES

A. FAILURE MODE, MECHANISM, AND EFFECTS OF EACH FAILED COMPONENT

Not applicable – No component or system failures were identified during this event.

B. CAUSE OF EACH COMPONENT OR SYSTEM FAILURE

Not applicable – No component or system failures were identified during this event.

C. SYSTEMS OR SECONDARY FUNCTIONS THAT WERE AFFECTED BY FAILURE OF COMPONENTS WITH MULTIPLE FUNCTIONS

Not applicable – No component or system failures were identified during this event.

D. FAILED COMPONENT INFORMATION

Not applicable – No component or system failures were identified during this event.

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III. ANALYSIS OF THE EVENT**A. SAFETY SYSTEM RESPONSES THAT OCCURRED**

Not applicable – No safety system responses occurred as a result of this event.

B. DURATION OF SAFETY SYSTEM TRAIN INOPERABILITY

The Unit 1 Containment Sump Level and Flow Monitoring system was determined to have been inoperable per TS on December 15, 2003, for approximately 31 hours. The Unit 1 Containment Sump Level and Flow Monitoring system could have also been inoperable at other times in the past due to the siphoning condition which existed since initial Unit 1 licensing in 1990.

C. SAFETY CONSEQUENCES AND IMPLICATIONS

Section 5.2.5.2.2 of the Final Safety Analysis Report (FSAR) describes the primary detection of unidentified leakage to the Containment atmosphere as being provided by air particulate monitors, containment sump flow monitors, and the condensate flow rate measuring system. These systems provide an early indication of reactor coolant pressure boundary degradation as soon after occurrence as practical to minimize the potential for a gross pressure boundary failure which would result in a loss of coolant accident. The leakage detection system is credited in the CPSES safety analyses for General Design Criteria 4 (GDC-4) Leak Before Break to detect leaks and allow an orderly shutdown prior to a LOCA. This event involved the inoperability of one of the means of Reactor Coolant System leak detection, namely the containment sump flow monitors. Had all means of detecting unidentified leakage been unavailable, early detection of a pressure boundary breach would have been compromised. However, a loss of coolant accident is fully bounded by Section 15.6.5 of the FSAR. Because the Containment Sump Level and Flow Monitoring system does not perform a nuclear safety function, there were no safety system functional failures associated with this event. Based on this analysis it was concluded that this event did not adversely affect the safe operation of CPSES Unit 1 or the health and safety of the public.

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IV. CAUSE OF THE EVENT

TXU Power has determined that the cause of this event was a siphoning condition that was inherent in the original design of the Unit 1 Containment Sump Level and Flow Monitoring system.

V. CORRECTIVE ACTIONS

To correct the siphoning condition, vacuum breakers were installed in the Unit 1 sump discharge piping. Unit 2 was not believed to be affected by this condition. However, vacuum breakers were also installed in Unit 2 sump discharge piping as a precautionary measure.

VI. PREVIOUS SIMILAR EVENTS

There has been one other reportable event in the last three years involving an original design condition (see LER 02-001-00 for Units 1 and 2). However, details/causes are sufficiently different from the event described in this LER such that the previous corrective actions could not have prevented this event.