

TXU Power Comanche Peak Steam Electric Station P. O. Box 1002 (E01) Glen Rose, TX 76043 Tel: 254 897 5209 Fax: 254 897 6652 mike.blevins@bxu.com Mike Blevins Senior Vice President & Chief Nuclear Officer

Ref: #10CFR50.36

CPSES-200500638 Log # TXX-050070 RP-85

March 17, 2005

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) DOCKET NOS. 50-445 AND 50-446 CORRECTION TO ANNUAL OPERATING REPORT FOR 2004

REF: TXU Power Letter logged TXX-05033 dated February 25, 2005, from Mike Blevins to the NRC

Gentlemen:

Attached is a resubmitted corrected CPSES Annual Operating Report for 2004 prepared and submitted pursuant to guidance provided in C.1.b of U.S. NRC Regulatory Guide 1.16, Revision 4. The attachment also submits the annual Occupational Radiation Exposure Report as required by Technical Specification 5.6.1 contained in Appendix A to the Comanche Peak Steam Electric Station Unit 1 Operating License NPF-87 and Unit 2 Operating License NPF-89. In the attachment to the above reference, pages 12 and 13 were numbered 13 and 14. The attachment to this letter corrects the page numbers for pages 12 and 13. No required information was omitted from the original submittal and no additional information is supplied by this correction. Please replace the attachment to above reference with this corrected attachment.

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This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2. Should you have any questions, please contact Douglas Snow at (254) 897-8448.

Sincerely,

TXU Generation Company LP

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By: TXU Generation Management Company LLC Its General Partner

Mike Blevins

By: Fred W. Madden

Director, Regulatory Affairs

DWS Attachment

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

COMANCHE PEAK STEAM ELECTRIC STATION

ANNUAL OPERATING REPORT

2004

TXU Generation Company LP

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1.0 SUMMARY OF OPERATING EXPERIENCE

The Comanche Peak Steam Electric Station (CPSES) is a dual unit pressurized water reactor power plant, supplied by Westinghouse Electric Corporation. It is located in Somervell County in North Central Texas approximately 65 miles southwest of the Dallas-Fort Worth Metropolitan area. Each generating unit core was originally designed for a warranted power output of 3411 Megawatt thermal (MWt). This output, combined with the reactor coolant pump heat output of 14 MWt, gives a warranted NSSS output of 3425 MWt, which is the license application rating. Both units rated thermal power was subsequently increased to 3458 MWt, which represents a 1.4 percent increase in core output (from 3411 to 3458 MWt). The reactor coolant pump heat output considered in the safety analysis was increased to approximately 16 MWt for both units. All safety systems, including the engineered safety features, are designed for operations at a maximum NSSS output of 3579 MWt and an associated maximum core output of 3565 MWt.

1.1 <u>CPSES_UNIT_1</u>

CPSES Unit 1 achieved initial criticality on April 3, 1990. Initial power generation occurred on April 24, 1990, and the plant was declared commercial on August 13, 1990. Since being declared commercial, CPSES Unit 1 has generated 118,003,248 net Megawatt-hours (MWH) of electricity as of December 31, 2004, with a net unit capacity factor of 81.36% (using MDC). The cumulative unit and reactor availability factors were 87.38% and 90.37%, respectively, as of December 31, 2004.

On March 27, 2004, the unit began a power ramp down for its tenth refueling outage. The unit entered the refueling outage on the same day. During the refueling outage, 93 fresh fuel assemblies were loaded for Cycle 11. The refueling outage lasted 37 days 19 hours and ended on May 4, 2004. Unit 1 reached 100% power on May 11, 2004.

During the refueling outage, the major work scope completed included:

- RCCA wear and swelling measurements
- Guide Tube Support Pin Replacement
- Alloy 600 inspections (Rx Head, BMI, Other RCS locations)
- 100% eddy current testing of the "U" tubes in all four steam generators
- Replace Low Pressure Turbines with upgrade turbines
- Install Upgrade on the Main Turbine/Generator Shaft Lift Oil System
- Perform 5-year inspection on Diesel Generator
- I&C Digital Upgrade to T/G Controls and Protection/Control Room Upgrade

Figure 1.1 provides the generation profile of the average daily net electrical output of Unit 1 for 2004. Table 1.1 is a compilation of the yearly and total summaries of the operating data.

During this reporting period there were no failures or challenges to the Safety Valves.

1.2 CPSES UNIT 2

CPSES Unit 2 achieved initial criticality on March 24, 1993. Initial power generation occurred on April 9, 1993, and the plant was declared commercial on August 3, 1993. Since being declared commercial, CPSES Unit 2 has generated 97,094,153 net Megawatt-hours (MWH) of electricity as of December 31, 2004, with a net unit capacity factor of 84.39 % (using MDC). The cumulative unit and reactor availability factors were 89.03% and 91.94%, respectively, as of December 31, 2004

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There was no refueling outage for Unit 2 during 2004.

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Figure 1.2 provides the generation profile of the average daily net electrical output of Unit 2 for 2004. Table 1.2 is a compilation of the yearly and the total summaries of the operating data.

During this reporting period there were no failures or challenges to the Safety Valves.

2.0 OUTAGES AND REDUCTIONS IN POWER

2.1 CPSES UNIT 1

Table 2.1 describes unit operating experience including unit shutdowns and provides explanations of significant dips in average power levels for CPSES Unit 1.

2.2 CPSES UNIT 2

Table 2.2 describes unit-operating experience including unit shutdowns and provides explanations of significant dips in average power levels for CPSES Unit 2.

3.0 EXPOSURE AND MONITORING REPORT

The personnel exposure and monitoring report for CPSES is provided in Table 3.0.

4.0 IRRADIATED FUEL INSPECTION RESULTS

4.1 <u>CPSES UNIT 1</u>

Visual examinations of Unit 1, Cycle 10 fuel assemblies were performed by inspection personnel by viewing the assemblies from the edge of Spent Fuel Pool #1 as assemblies were off-loaded from the core. Some randomly selected fuel assemblies were examined using underwater camera equipment which was performed concurrently with the poolside visual exams. All fuel assemblies appeared to be in good condition with no anomalies observed. In general, only light residual crud levels on the assemblies were observed which were consistent with crud patterns observed during previous refueling outage inspection campaigns.

Results of RCCA Examinations Performed During 1RF10:

During the refueling outage (1RF10), Unit 1 control rods (RCCAs) were inspected by Westinghouse for cladding wear and rod tip swelling to determine the condition of the control rods prior to reaching their original design end of life (12 EFPY), which would occur during Cycle 11. The inspection results indicated minimal clad wear and no tip swelling and were therefore cleared for one more cycle of operation.

However, during the above inspections, it was discovered that RCCA R522 was missing one control rodlet (out of the 24 rodlets per RCCA). It was subsequently determined that the rodlet had separated from the RCCA hub and dropped into the corresponding guide tube of host assembly L11 sometime during either refueling outage 1RF09 RCCA shuffling, Cycle 10 operation, or during 1RF10 RCCA inspections. A review of the results of the core flux maps performed during Cycle 10 did not reveal any discernible indications as to if or when the separated rodlet event occurred during the cycle. No known similar event has been reported in the industry. The limited clad wear and lack of any tip swelling observed during the inspections suggested that degradation of the RCCAs was not a factor in the separation of the rodlet. Additional detailed underwater camera visual inspections were performed on R522 in August, 2004 to support the Westinghouse root cause investigation. These inspections confirmed that the rodlet was still fully intact, including the threaded portion of the top end plug that screws into the RCCA hub finger. The root cause investigation concluded that this event was the result of an isolated manufacturing defect that allowed the rodlet to progressively unscrew from the hub during reactor operations.

Spare control rod R508, which had seen previous service in Unit 1, was re-inspected for wear and tip swelling prior to its use as the replacement for R522 in Unit 1, Cycle 11.

4.2 <u>CPSES UNIT 2</u>

There were no irradiated fuel inspections performed on Unit 2 fuel in 2004

5.0 <u>OUTAGE RELATED SINGLE RADIOACTIVITY RELEASE OR RADIATION</u> <u>EXPOSURE TO AN INDIVIDUAL THAT ACCOUNTS FOR MORE THAN 10</u> <u>PERCENT OF ALLOWABLE ANNUAL VALUES</u>

CPSES Units 1 and 2 did not experience any single release of radioactivity greater than 10% of an allowable dose limit during an outage or forced reduction in power of over 20% of designed power level during 2004.

During 2004 Unit 1 conducted a refueling outage (see section 1.1). During the outage activities, no individual received radiation exposure exceeding 10% of an allowable dose limit in a single exposure event. Exposure is tabulated in Table 5.0.



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FIGURE 1.1 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1 GENERATION PROFILE AVERAGE DAILY UNIT POWER LEVEL for 2004 .

TABLE 1.1

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COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1

ANNUAL ELECTRIC POWER GENERATION DATA (2004)

	YEAR	CUMULATIVE
Hours RX was Critical	7,917.00	111,102.43
RX Reserve Shutdown Hours	0	2870.89
Hours Generator On-line	7,877.88	110,194.10
Gross Thermal Energy Generated (MWH)	26,958,967	366,392,267
Gross Electric Energy Generated (MWH)	9,372,228	123,293,888
Net Electric Energy Generated (MWH)	9,018,126	118,003,249
RX Service Factor (%)	90.13	88.10
RX Availability Factor (%)	90.13	90.37
Unit Service Factor (%)	89.68	87.38
Unit Availability Factor (%)	89.68	87.38
Unit Capacity Factor (%, using MDC net)	89.27	81.36
Unit Capacity Factor (%, using DER net)	89.27	81.36
Unit Forced Outage Rate (%)	0	2.80



FIGURE 1.2 COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2 GENERATION PROFILE AVERAGE DAILY UNIT POWER LEVEL for 2004

TABLE 1.2

COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2

ANNUAL ELECTRIC POWER GENERATION DATA (2004)

	YEAR	CUMULATIVE
Hours RX was Critical	8,784.00	89,620.05
RX Reserve Shutdown Hours	0	2,366.46
Hours Generator On-line	8,784.00	89,070.28
Gross Thermal Energy Generated (MWH)	30,232,082	297,308,796
Gross Electric Energy Generated (MWH)	10,439,312	101,220,422
Net Electric Energy Generated (MWH)	10,038,851	97,094,153
RX Service Factor (%)	100.00	89.58
RX Availability Factor (%)	100.00	91.94
Unit Service Factor (%)	100.00	89.03
Unit Availability Factor (%)	100.00	89.03
Unit Capacity Factor (%, using MDC net)	99.38	84.39
Unit Capacity Factor (%, using DER net)	99.38	84.39
Unit Forced Outage Rate (%)	0.00	2.80

TABLE 2.1COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 1UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2004

NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	040211	F	NA	A	NA	On February 11, 2004 at 1629 a Unit 1 turbine EHC control system DC to DC converter failed. Failure of 10f 2 EHC controllers to hydraulically isolate when intentionally deenergized resulted in an unplanned load rejection from 95% to about 71% reactor power. This meets the criteria for an NRC unplanned 20% transient. Unit was stabilized at approximately 86% reactor power. Following repairs, the unit returned to full power on February 12, 2004 at 0224 and finished the month in that status. (Reference SMF-2004-000508)
2	040327	S	907.13	С	2	On March 27, 2004 at 0900 the unit began downpower to enter 1RF10. Unit was tripped per procedure at 1215 entering MODE 3. Unit entered MODE 6 March 30, 2004 at 2010. Unit exited MODE 6 after core reload April 24, 2004 and entered MODE 5 at 0039. On May 2, 2004 Unit entered MODE 2 and reactor was critical at 1615. Unit entered MODE 1 on May 3, 2004 at 1154. Unit was synchronized to grid on May 4, 2004 at 0723 ending 1RF10. Duration of 37 days and 19 hours. The unit returned to full power on May 11, 2004 at 1023.

1) REASON

A: EQUIPMENT FAILURE (EXPLAIN) B: MAINT OR TEST C: REFUELING D: REGULATORY RESTRICTION E: OPERATOR TRAINING AND LICENSE EXAMINATION F: ADMINISTRATIVE G: OPERATIONAL ERROR (EXPLAIN) H: OTHER (EXPLAIN) 2) METHOD

1: MANUAL 2: MANUAL SCRAM 3: AUTOMATIC SCRAM 4: OTHER (EXPLAIN)

INDICATES SHUTDOWN HOURS/OTHERWISE "NA" FOR NOT APPLICABLE

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TABLE 2.2COMANCHE PEAK STEAM ELECTRIC STATION - UNIT 2UNIT OPERATING EXPERIENCE INCLUDING SHUTDOWNS AND POWER REDUCTIONS DURING 2004

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NO	DATE	TYPE F: FORCED S: SCHEDULED	DURATION* (HOURS)	REASON	METHOD OF SHUTTING DOWN THE REACTOR OR REDUCING POWER	CORRECTIVE ACTION/COMMENTS
1	041008	F	NA	A	NA	On October 08, 2004 at 1340, the unit reduced power to ~60% reactor power in response to a reduction in heater drain flow when a level transmitter failed. This meets the criteria for an NRC unplanned 20% transient. While at reduced power, discretionary testing of the turbine stop and control valves was performed at about 75% reactor power. Unit returned to full power on October 9, 2004 at 0306. (Reference SMF-2004-003413)
2	041103	F	NA	G	NA	On November 03, 2004 at 1830 the unit experienced an unplanned runback to about 61% reactor power. This meets the criteria for an NRC unplanned 20% transient. Upon restoring the Phase A generator potential feed to the turbine control system after maintenance, the turbine speed target setpoint had not been reset as required by procedure and the runback occurred as designed. (Reference SMF-2004-003639)

I) REASON		2) METHOD
A: EQUIPMENT FAILURE (EXPLAIN) B: MAINT OR TEST C: REFUELING D: REGULATORY RESTRICTION	E: OPERATOR TRAINING AND LICENSE EXAMINATION F: ADMINISTRATIVE G: OPERATIONAL ERROR (EXPLAIN) H: OTHER (EXPLAIN)	1: MANUAL 2: MANUAL SCRAM 3: AUTOMATIC SCRAM 4: OTHER (EXPLAIN)

* INDICATES SHUTDOWN HOURS/OTHERWISE [INA] FOR NOT APPLICABLE

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TXX-05070 Corrected Attachment to TXX-05033

TABLE 3.0COMANCHE PEAK STEAM ELECTRIC STATION - UNITS 1 AND 22004 PERSONNEL EXPOSURE AND MONITORING REPORT

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		#Personnel		To	otal Person rem	
Work & Job Function	Station	Utility	Contract	Station	Utility	Contract
Reactor Operations & Surveillance						
Maintenance & Construction	94	0	62	0.245	0.000	0.139
Operations	192	0	129	2.032	0.000	0.246
Health Physics & Lab	44	0	52	1.029	0.000	0.468
Supervisory & Office Staff	15	0	1	0.066	0.000	0.001
Engineering Staff	70	0	28	0.201	0.000	0.028
Routine Plant Maintenance						
Maintenance & Construction	151	0	439	4.711	0.000	24.568
Operations	129	0	32	3.334	0.000	0.337
Health Physics & Lab	42	0	89	1.663	0.000	7.593
Supervisory & Office Staff	7	0	1	0.054	0.000	0.079
Engineering Staff	43	0	144	0.536	0.000	47.928
In-service Inspection						
Maintenance & Construction	7	0	24	0.014	0.000	0 496
Operations	8	Õ	4	0.014	0.000	0.470
Health Physics & I ah	8 2	Õ	4	0.013	0.000	0.054
Supervisory & Office Staff	0	Õ	0	0.013	0.000	0.000
Engineering Staff	13	Ő	57	0.000	0.000	4 4 1 6
Lighteening Statt	15	v	57	0.948	0.000	4.410
*Special Plant Maintenance						
Maintenance & Construction	22	0	100	0.447	0.000	1.958
Operations	27	0	5	0.259	0.000	0.026
Health Physics & Lab	5	0	8	0.071	0.000	0.274
Supervisory & Office Staff	2	0	0	0.011	0.000	0.000
Engineering Staff	9	0	49	0.130	0.000	5.112
Waste Processing						
Maintenance & Construction	12	0	15	0.011	0.000	0.176
Operations	13	0	6	0.137	0.000	0.243
Health Physics & Lab	25	0	14	0.470	0.000	0.074
Supervisory & Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	2	0	0	0.032	0.000	0.000
Refueling						
Maintenance & Construction	49	0	123	1.054	0.000	1.678
Operations	38	0	8	1.363	0.000	0.033
Health Physics & Lab	26	0	63	0.917	0.000	3.539
Supervisory & Office Staff	2	0	1	0.012	0.000	0.004
Engineering Staff	16	0	91	0.231	0.000	16.732
Totals						
Maintenance & Construction	335	0	763	6.482	0.000	29.015
Operations	407	0	184	7.247	0.000	0.939
Health Physics & Lab	144	0	232	4.161	0.000	12.002
Supervisory & Office Staff	26	0	3	0.143	0.000	0.083
Engineering Staff	153	0	369	2.077	0.000	74.217
Grand Totals	1065	0	1551	20.111	0.000	116.256
 * Steam Generator replacement walkdowns * Design Modifications 						

TXX-05070 Corrected Attachment to TXX-05033

TABLE 5.0

2004 COMANCHE PEAK STEAM ELECTRIC STATION - UNITS 1 AND 2 OUTAGE RELATED RADIATION EXPOSURE TO AN INDIVIDUAL FOR A SINGLE MAINTENANCE ACTIVITY WHICH EXCEEDS 10 PERCENT OF AN ALLOWABLE ANNUAL DOSE LIMIT*

<u>Maintenance</u> <u>Activity</u>	<u>Department</u>	<u>Individual's</u> <u>Single Event</u> <u>Exposure (mrem)</u>	<u>Total Annual</u> Exposure (mrem)		
N/A	N/A	N/A	N/A		
No activities exceeded the allowable 10 percent dose limit.					

*Subject annual dose limit is 5000 mrem deep dose equivalent