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CPSES-200700859  
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April 27, 2007

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

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NOS. 50-445/446  
SUBMITTAL OF THE ANNUAL NON-RADIOLOGICAL  
ENVIRONMENTAL OPERATING REPORT FOR 2006**

Gentlemen:

Attached is one (1) copy of the Annual Non-Radiological Environmental Operating Report for the CPSES Non-Radiological Environmental Monitoring Program. This report is submitted pursuant to Appendix B of the CPSES Unit 1 and 2 Operating License Nos. NPF-87 and NPF-89. The report covers the period from January 1, 2006 through December 31, 2006 and summarizes the results of measurements and analysis of data obtained from samples collected during this interval.

If there are any questions regarding this report, contact Neil Harris at (254) 897-5449 or Bruce Turner at (254) 897-8901.

TXX-07085  
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This communication contains no new licensing basis commitments regarding CPSES Units 1 and 2.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,  
Its General Partner

Mike Blevins

By:   
Fred W. Madden  
Director, Oversight and Regulatory Affairs

NSH

Attachment:

Annual Non-Radiological Environmental Operating Report for 2006

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

**TXU GENERATION COMPANY LP  
(TXU POWER)**

**COMANCHE PEAK STEAM ELECTRIC STATION**

**UNITS 1 & 2**

**2006**

**ANNUAL ENVIRONMENTAL OPERATING REPORT**

**(NON-RADIOLOGICAL)**

**FACILITY OPERATING LICENSE NOS. NPF-87 & 89**

## **I. INTRODUCTION**

This report describes implementation of the Environmental Protection Plan (EPP) for the calendar year 2006 as required by Appendix B to Facility Operating License Nos. NPF-87 & 89 for Comanche Peak Steam Electric Station (CPSES) for Units 1 & 2.

During 2006, the CPSES Nonradiological Environmental Monitoring Program was effective in implementing and monitoring all CPSES environmental regulatory commitments. Program effectiveness in 2006 was substantiated by TXU Corporate environmental audits and compliance evaluations of the CPSES environmental program.

## **II. SCOPE**

Section 5.4.1 of the EPP requires that CPSES submit to the NRC an Annual Environmental Operating report that shall address the following environmental protection activities:

- A. Summaries and analyses of the results of the environmental protection activities required by Section 4.2 of the EPP, including a comparison with related preoperational studies, operational controls (as appropriate), and previous nonradiological environmental monitoring reports, and an assessment of the observed impacts of plant operation on the environment. If harmful effects or evidence of trends toward irreversible damage to the environment are observed, a detailed analysis of the data and a proposed course of mitigating action is required. Section 4.2 of the EPP pertains to results from:
  - 1. Groundwater levels and station water use monitoring.
  - 2. Water treatment facility outages impact assessment and reporting.
- B. The report shall also include:
  - 1. A list of EPP noncompliances and the associated corrective actions.
  - 2. A list of all changes in station design and operation, tests, and experiments made in accordance with Subsection 3.1 of the EPP which involved a potentially significant unreviewed environmental question.
  - 3. A list of nonroutine reports submitted in accordance with Subsection 5.4.2 of the EPP.
  - 4. A summary list of Texas Pollutant Discharge Elimination System (TPDES) permit related reports relative to matters identified in Subsection 2.1 of the EPP which were submitted to the Texas Commission on Environmental Quality (TCEQ) during the report period. Subsection 2.1 of the EPP pertains to aquatic matters that are addressed by the effluent limitations, and the monitoring requirements contained in the TCEQ TPDES station wastewater discharge permit.

## **III. RESULTS OF ACTIVITIES**

- A. As required by Subsection 4.2 of the EPP, the following are summaries and analyses of the environmental protection activities during 2006. Based on the results of these activities, there were no observed adverse environmental impacts resulting from plant operation during 2006.

## 1. Groundwater Pumpage

As indicated in Table 1, groundwater pumpage during 2006 averaged 17.3 gals./min. (gpm) or 9,092,700 total gallons withdrawn for the year. This withdrawal rate represents a 4.4% decrease from the 2005 average rate of 18.1 gpm. Groundwater withdrawal was highest in March at 23.5 gpm and lowest in November and December with an average monthly withdrawal rate of 13.2 gpm.

Groundwater withdrawn during 2006 was used primarily for potable and sanitary purposes with only a very small amount used as make-up to the plant fire protection system. No groundwater was used to supplement the station's Surface Water Treatment System.

The average annual pumpage rate of 17.3 gpm for 2006 represents 13.6% of the predicted operational pumpage (127 gpm) identified in Section 3.3 of the Station's Environmental Report - Operational License Stage. This rate also represents approximately 10.9% of the actual average withdrawal rate (158 gpm) reported in the Station's Final Environmental Statement - Operating License Stage (Section 5.3.1.2) for the period 1975 to May 1979.

The combined annual rate for all recorded pre-operational groundwater pumpage averaged 68.8 gpm, while the average operational pumpage for the period 1990 through 2006 was 26.2 gpm. Therefore, the average operational rates are 62% less than the groundwater pumpage during the preoperational period. Figure 1 illustrates the annual fluctuation of groundwater withdrawal over the entire pre-operational and operational period.

## 2. Groundwater Levels

As indicated in Table 2, the groundwater level in the on-site observation well OB-3 (intersection of Highway 56 and the Plant Access Road) fluctuated during 2006 from a high level in May of 519.0 ft. Mean Sea Level (MSL) to a low level in August of 512.8 ft. MSL. Overall, the water level in OB-3 during the reporting period (January through December) decreased 2.6 ft. (0.8m).

The 2006 annual average groundwater levels in wells OB-3 and OB-4 were 516.1 ft. MSL and 541.2 ft. MSL, respectively. These average levels demonstrated a decrease of 7.0 ft. (2.1m) for OB-3 and a decrease of 10.8 ft. (3.3m) for OB-4 from the respective average 2005 levels (Figure 2).

As illustrated by Figure 2, the overall general decline in groundwater levels appears to have increased significantly during 2006 as compared to previous annual averages. It is recommended that this decline is unrelated to the operation of the CPSES, since actual groundwater pumpage at CPSES was 4.4% less in 2006 as compared to 2005 (see section III.A.1). Although groundwater pumpage increased slightly when comparing 2005 to 2004, overall annual groundwater pumpage generally declined throughout the previous decade (Figure 1). A predominate influencing factor is likely the significant increase in gas well drilling activities occurring in the region surrounding CPSES. These gas well drilling activities require large amounts

of water for fracturing and much of this water is being supplied by groundwater sources from the Trinity Aquifer.

The use of groundwater for these activities and the potential impact to groundwater levels is gaining considerable attention, both locally and at the state level. Since rainfall during 2006 was significantly greater than in 2005 ( 30.5 in. vs. 16.4 in., respectively), it is unlikely that precipitation was a contributor to the decline in groundwater levels.

3. Surface Water Treatment System Operation

The station's Water Treatment System processed 223,450,900 total gallons (431 gpm) of surface water during 2006 for plant process use. There were no outages during 2006 that required reporting in accordance with Section 4.2.2 of the EPP.

The following is a summary list of monthly surface water usage:

MONTH	SURFACE WATER PROCESSED (GALS.)
JANUARY	16,832,600
FEBRUARY	18,147,500
MARCH	20,357,700
APRIL	15,952,500
MAY	20,497,900
JUNE	18,894,500
JULY	19,624,000
AUGUST	19,554,300
SEPTEMBER	18,679,600
OCTOBER	18,477,900
NOVEMBER	16,904,642
DECEMBER	19,527,758
TOTAL	223,450,900

B. EPP Noncompliance and Corrective Actions - Subsection 5.4.1(1)

There were no noncompliances with the requirements of the EPP during the reporting period.

C. Changes In Station Design or Operation, Tests, and Experiments Made In Accordance With Subsection 3.1 Which Involved A Potentially Significant Unreviewed Environmental Question.

There were no changes in station design, operation, tests or experiments conducted during the reporting period that are reportable under this subsection.

D. Nonroutine Reports Submitted In Accordance With Subsection 5.4.2

Other than those nonroutine reports identified in section III.E, there were no other nonroutine reports submitted under this subsection.

E. Texas Pollutant Discharge Elimination System (TPDES) Permit-Related Reports Relative To Matters Identified In Subsections 2.1 and 5.4.1

1. Routine monthly Discharge Monitoring Reports (DMR) for all wastewater outfalls were submitted to the Texas Commission on Environmental Quality (TCEQ) for each month during 2006. The following is a summary list of correspondence pertaining to DMRs and TPDES permit related documents.

MONTH MONITORED	LOG NUMBER/DATE
JANUARY	TXX-06033 - 02/20/06
FEBRUARY	TXX-06055- 03/20/06
MARCH	TXX-06073 - 04/20/06
APRIL	TXX-06083- 05/19/06
MAY	TXX-06083 - 06/21/06
JUNE	TXE-06127- 07/20/06 TXX-06131 Biomonitoring Report for 1/1/2006-6/30/2006
JULY	TXE-06140 - 08/17/06
AUGUST	TXE-06160- 09/20/2006
SEPTEMBER	TXE-06177- 10/20/2006
OCTOBER	TXE-06188- 11/16/2006
NOVEMBER	TXE-06199- 12/19/2006
DECEMBER	TXE-07009 1/17/2007 TXE-07010 1/17/2006 Biomonitoring Report for 7/1/2006-12/31/2006

2. Routine biomonitoring was conducted semi-annually in accordance with the TPDES Permit. The tests using the fathead minnow (*Pimephales promelas*) were passed in accordance with all criteria. The *Ceriodaphnia dubia* tests were invalid due to insufficient survival and neonate production in the control (intake) water. These invalidations are believed to be a result of elevated Total Dissolved Solids in Squaw Creek Reservoir. The company has been collecting data which supports this view and will be submitting a request for an alternate invertebrate species for use in testing when the reservoir is at these higher TDS concentrations in the second quarter of 2007.
3. There were no TPDES wastewater discharge permit noncompliances in 2006.
4. There were also no reportable spills during 2006.



**TABLE 1**  
**SUMMARY OF GROUNDWATER PUMPAGE**  
**For 2006**

MONTH	PLANT WELL 1		PLANT WELL 2		NOSF WELL 1		NOSF WELL 2		REC/TRAINING		TOTALS		NO. OF DAYS BETWEEN READINGS
	Total Gals.	Avg. Gal. Per Min.	Total Gals.	Avg. Gal. Per Min.	Total Gals.	Avg. Gal. Per Min.	Total Gals.	Avg. Gal. Per Min.	Total Gals.	Avg. Gal. Per Min.	Total Gals.	Avg. Gal. Per Min.	
January	0	0.0	747,900	16.8	31,200	0.7	54,100	1.2	2,400	0.0	835,600	18.7	31
February	360,800	8.9	264,500	6.6	62,700	1.6	69,700	1.7	2,100	0.0	759,800	18.8	28
March	20,200	0.5	931,500	20.9	46,600	1.0	50,000	1.1	2,400	0.3	1,050,700	23.5	31
April	0	0.0	816,200	18.9	43,900	1.0	42,600	1.0	1,700	0.1	904,400	20.9	30
May	56,400	1.3	506,900	11.4	69,200	1.6	52,900	1.2	2,900	0.1	688,300	15.4	31
June	196,400	4.5	476,700	11.0	43,900	1.0	44,600	1.0	1,000	0.1	762,600	17.7	30
July	0	0.0	544,400	12.2	75,100	1.7	76,100	1.7	1,900	<0.1	697,500	15.6	31
August	0	0.0	490,600	11.0	106,700	2.4	80,300	1.8	1,400	0.1	679,000	15.2	31
September	0	0.0	346,100	8.0	148,000	3.4	132,100	3.1	2,300	<0.1	628,500	14.5	30
October	0	0.0	672,000	15.1	132,200	3.0	123,200	2.8	2,600	<0.1	930,000	20.8	31
November	129,400	3.0	190,900	4.4	128,600	3.0	118,200	2.7	1,700	<0.1	568,800	13.2	30
December	498,200	11.2	0	0.0	41,200	0.9	47,000	1.1	1,100	<0.1	587,500	13.2	31
<b>TOTAL</b>	<b>1,261,400</b>	<b>2.4</b>	<b>5,987,700</b>	<b>11.3</b>	<b>929,300</b>	<b>1.8</b>	<b>890,800</b>	<b>1.7</b>	<b>23,500</b>	<b>0.1</b>	<b>9,092,700</b>	<b>17.3</b>	<b>365</b>

**TABLE 2****2006 SUMMARY OF GROUNDWATER  
LEVELS IN OBSERVATION WELLS**

MONTH	WELL OB-3 (G-3)		WELL OB-4 (G-4)	
	DEPTH (1)	MSL (2)	DEPTH (1)	MSL (2)
January	276.5	517.3	306.6	541.3
February	276.7	517.1	305.6	542.3
March	275.6	518.2	303.1	544.8
April	274.3	518.8	307.0	540.1
May	274.1	519.0	297.5	549.6
June	275.7	518.2	299.2	548.7
July	277.8	516.1	305.0	542.9
August	281.0	512.8	311.7	536.2
September	280.5	513.3	313.7	534.1
October	280.5	513.3	312.2	535.7
November	279.4	514.4	310.0	537.9
December	279.1	514.7	307.2	540.7

**ANNUAL GROUNDWATER LEVEL CHANGE FOR 2005:**

Well OB-3: 276.5 ft. - 279.1 ft = (-)2.6ft. = (-)0.8 m (decrease)

Well OB-4: 306.6 ft. - 307.2 ft = (-) 0.6 ft. = (-)0.2 m (decrease)

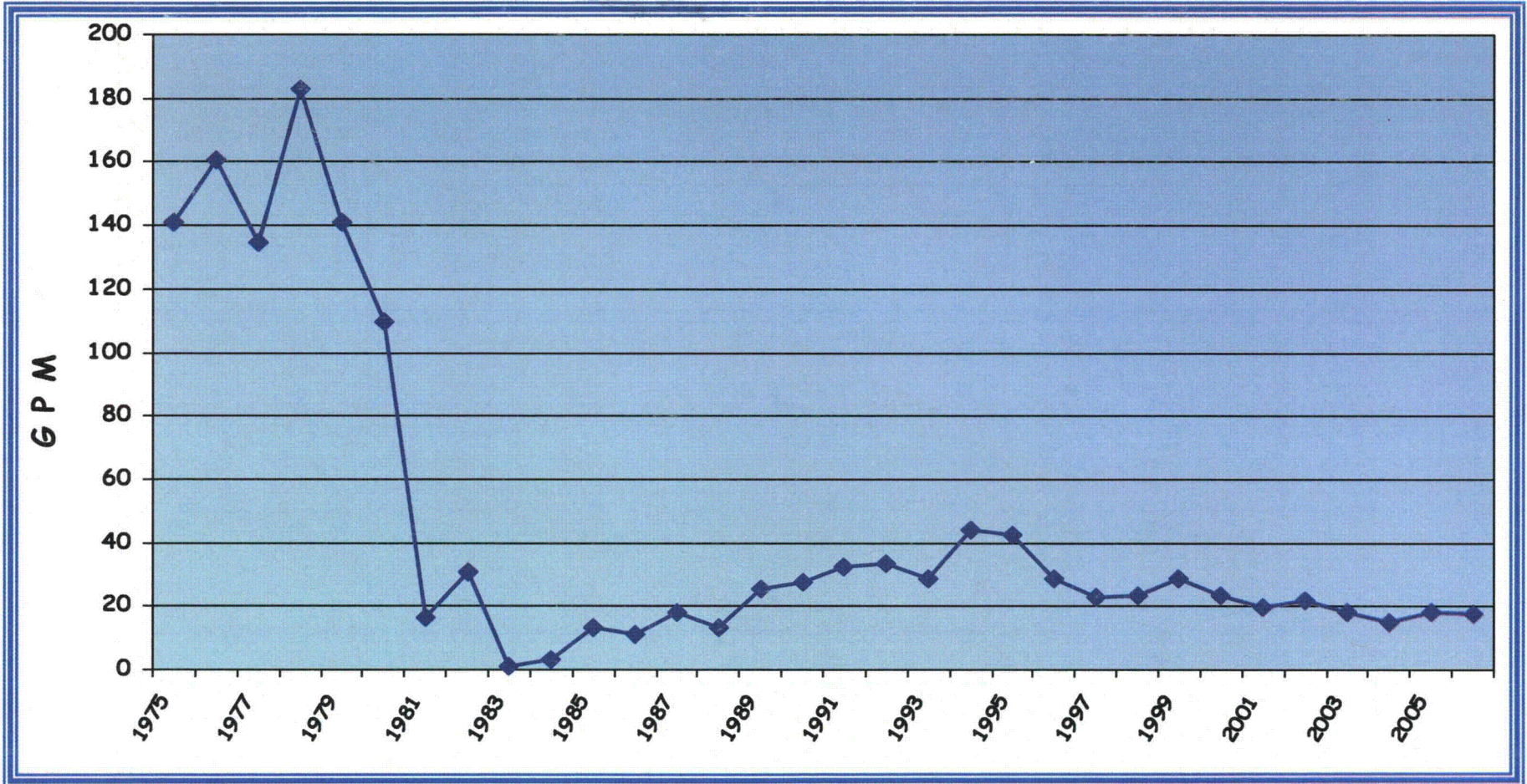
**NOTES:**

(1) Depth to water table (ft.)

(2) Water table elevation (ft.) Mean Sea Level (MSL)

**FIGURE 1**  
**SUMMARY OF GROUNDWATER PUMPAGE**  
**1975 THROUGH 2006 (GPM)**

Annual Groundwater Pumpage



1. 2/8/90 - Unit #1 Operational. Discontinued using treated surface water for potable use.
2. 2/2/93 - Unit #2 Operational

**FIGURE 2**  
**ANNUAL AVERAGE GROUNDWATER LEVEL**  
**1980 through 2006**

