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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 2008**

Dear Sir or Madam:

Luminant Generation Company LLC (Luminant Power) hereby submits for Comanche Peak Steam Electric Station, herein referred to as Comanche Peak Nuclear Power Plant (CPNPP), the enclosed copy of the Annual Non-Radiological Environmental Operating Report for the CPNPP 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, 2008 through December 31, 2008 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 Steve Dixon at (254) 897-5482 or Bruce Turner at (254) 897-8901.

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

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: 

Fred W. Madden  
Director, Oversight & Regulatory Affairs

A member of the STARS (Strategic Teaming and Resource Sharing) Alliance

Callaway · Comanche Peak · Diablo Canyon · Palo Verde · South Texas Project · Wolf Creek

JE25  
NRR

Enclosure - Annual Non-Radiological Environmental Operating Report for 2008  
Attachments - Figure 1, "Summary of Groundwater Pumpage 1975 through 2008 (gpm)"  
Figure 2, "Annual Average Groundwater Level 1980 through 2008"

c - E. E. Collins, Region IV  
B. K. Singal, NRR  
Resident Inspectors, Comanche Peak

**Enclosure –**

**Annual Non-Radiological Environmental Operating  
Report for 2008**

**LUMINANT POWER**  
**COMANCHE PEAK NUCLEAR POWER PLANT**  
**UNITS 1 & 2**  
**2008**  
**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 2008 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 2008, the CPNPP Nonradiological Environmental Monitoring Program was effective in implementing and monitoring all CPNPP environmental regulatory commitments. Program effectiveness in 2008 was substantiated by Luminant Corporate environmental audits and compliance evaluations of the CPNPP environmental program.

## **II. SCOPE**

Section 5.4.1 of the EPP requires that CPNPP 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 2008. Based on the results of these activities, there were no observed adverse environmental impacts resulting from plant operation during 2008.

#### 1. Groundwater Pumpage

As indicated in Table 1, groundwater pumpage during 2008 averaged 13.3 gals /min. (gpm) or 7,033,800 total gallons withdrawn for the year. This withdrawal rate represents a 15.8% decrease from the 2007 average rate of 15.8 gpm. Groundwater withdrawal was highest in October at 18.7 gpm and lowest in December with an average monthly withdrawal rate of 8.3 gpm.

Groundwater withdrawn during 2008 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 13.3 gpm for 2008 represents 10.5% 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 8.4 % 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 2008 was 23.5 gpm. Therefore, the average operational rates are 65.8% 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 1, the groundwater level in the on-site observation well OB-3 (intersection of Highway 56 and the Plant Access Road) fluctuated during 2008 from a high level in April of 520.33 ft. Mean Sea Level (MSL) to a low level in July of 514.0 ft. MSL. Overall, the water level in OB-3 during the reporting period (January through December) decreased 2.5 ft. (0.76m).

The 2008 annual average groundwater levels in wells OB-3 and OB-4 were 517.40 ft. MSL and 548.43 ft. MSL, respectively. These average levels demonstrated a decrease of 2.5 ft. (0.76m) for OB-3 and a decrease of 6.46 ft.(1.97m) for OB-4 from the respective average 2007 levels (Figure 2).

As illustrated by Table 1, ground water levels decreased during the reporting period. This decrease coincided with decrease rainfall of 24.18 inches during 2008 as compared to 37.7 inches in 2007.

3. Surface Water Treatment System Operation

The station's Water Treatment System processed 256,211,400 total gallons (486 gpm) of surface water during 2008 for plant process use. There were no outages during 2008 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	20,521,500
FEBRUARY	19,107,300
MARCH	19,616,700
APRIL	21,898,600
MAY	20,829,100
JUNE	20,066,600
JULY	21,761,900
AUGUST	21,636,300
SEPTEMBER	20,674,000
OCTOBER	25,635,400
NOVEMBER	22,593,600
DECEMBER	21,870,400
TOTAL	256,211,400

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

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

B. 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.

C. 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.

D. 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 2008. The following is a summary list of correspondence pertaining to DMRs and TPDES permit related documents.

Month Monitored	Log Number/Date
January	TXE-08027 02/11/2008
February	TXE-08048 03/10/2008
March	TXE-08062 04/08/2008
April	TXE-08080 05/08/2008
May	TXE-08089 06/05/2008
June	TXE-08101 07/10/2008 TXX-08102 (Biomonitoring Report for 01/01/2008-06/30/2008)
July	TXE-08112 08/06/2008
August	TXE-08126 09/16/2008
September	TXE-08134 10/14/2008
October	TXE-08142 11/11/2008
November	TXE-08153 12/10/2008
December	TXE-09012 01/12/2009 TXE-09013 (Biomonitoring Report for 07/01/2008-12/31/2008)

2. Routine biomonitoring was conducted semi-annually in accordance with the TPDES Permit. The tests using the 7-day fathead minnow (*Pimephales promelas*) were passed in accordance with all criteria. The 7-day *Ceriodaphnia dubia* test performed during the first semi-annual monitoring period was invalid due to insufficient neonate production in the control (intake) water. Per agreement with the Texas Commission on Environmental Quality (TCEQ), a 4-day *Daphnia magna* Survival/Growth test was conducted and passed. TCEQ accepted these results in lieu of the *C. dubia* test. The 7-day *C. dubia* was valid and passed during the second semi-annual monitoring period. The Company currently has a TPDES Permit Application pending which includes the agreed alternate invertebrate species test, the 4-day *D. magna* Survival/Growth test for use when the reservoir TDS is elevated.
3. There were no TPDES wastewater discharge permit noncompliances in 2008.

4. There were also no reportable spills during 2008.

**TABLE 1**

**2008 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	274.3	519.53	296.66
February	274.28	519.55	296.60	553.90
March	273.98	519.85	296.21	554.29
April	273.50	520.33	295.06	555.44
May	274.69	519.14	295.58	554.92
June	276.83	517.0	301.50	549.0
July	279.83	514.0	308.08	542.42
August	277.6	516.23	309.15	541.35
September	278.6	515.23	308.91	541.59
October	278.8	515.03	308.69	541.81
November	277.9	515.93	305.32	545.18
December	276.8	517.03	303.12	547.38

**ANNUAL GROUNDWATER LEVEL CHANGE FOR 2008:**

Well OB-3: 274.3 ft. - 276.8 ft. = -2.5 ft. = 0.76 m (decrease)

Well OB-4: 296.66 ft. - 303.12 ft. = -6.46 ft. = 1.97 m (decrease)

**NOTES:**

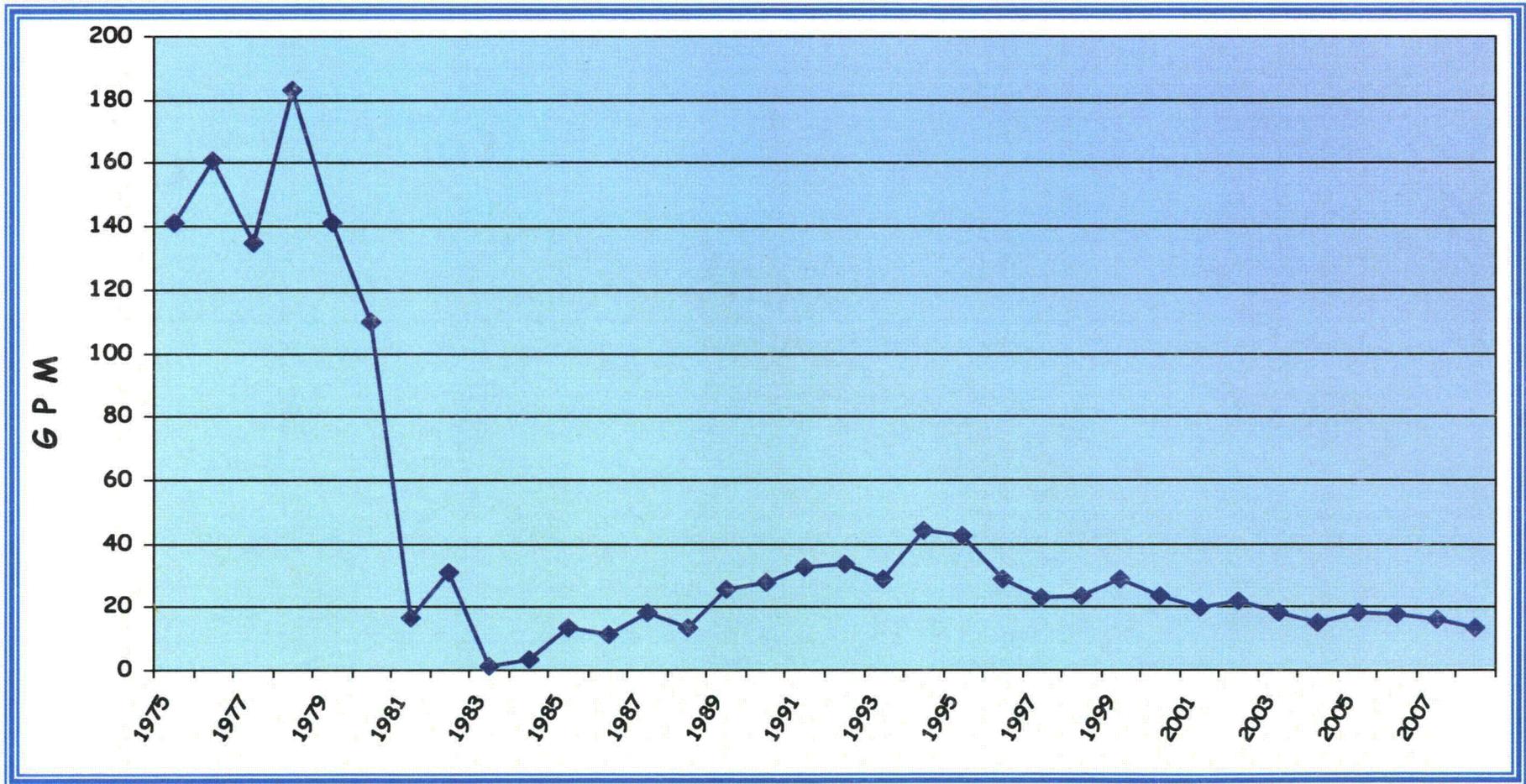
- (1) Depth to water table (ft.)
- (2) Water table elevation (ft.) Mean Sea Level (MSL)

**Table 2**  
**SUMMARY OF GROUNDWATER PUMPAGE**  
**For 2008**

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.											
January	483,000	10.8	0	0.0	47,900	1.1	57,800.0	1.3	5,500	0.1	594,200	13.3	31
February	294,800	7.1	192,600	4.6	36,700	0.9	44,200	1.1	1,100	0.0	569,400	13.6	29
March	157,400	3.5	411,000	9.2	63,100	1.4	62,600	1.4	4,400	0.1	698,500	15.6	31
April	685,300	15.9	0	0.0	28,000	0.6	40,000	0.9	2,300	0.1	755,600	17.5	30
May	189,200	4.2	176,800	4.0	45,500	1.0	34,400	0.8	2,000	0.0	447,900	10.0	31
June	57,900	1.3	464,100	10.7	47,000	1.1	53,200	1.2	1,700	0.0	623,900	14.4	30
July	251,300	5.6	205,100	4.6	58,100	1.3	55,000	1.2	2,700	0.1	572,200	12.8	31
August	0	0	385,100	8.6	41,600	0.9	40,000	0.9	1,200	0.0	467,900	10.5	31
September	205,300	4.8	326,600	7.6	56,100	1.3	50,500	1.2	2,000	0.0	640,500	14.8	30
October	714,700	16.0	34,800	0.8	45,900	1.0	35,500	0.8	1,900	0.0	832,800	18.7	31
November	0	0	375,200	8.7	37,400	0.9	43,300	1.0	2,300	0.1	458,200	10.6	30
December	196,800	4.4	110,600	2.5	31,800	0.7	32,300	0.7	1,200	0.0	372,700	8.3	31
Total	269,642	6.1	223,492	5.1	44,925	1.0	45,733	1.0	2,358	0.1	7,033,800	13.3	366

**FIGURE 1**  
**SUMMARY OF GROUNDWATER PUMPAGE**  
**1975 THROUGH 2008 (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 2008**

