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Executive Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) - UNIT 1  
DOCKET NO. 50-445  
ENVIRONMENTAL PROTECTION PLAN - ANNUAL  
ENVIRONMENTAL OPERATING REPORT FOR 1990

Gentlemen:

Pursuant to Section 5.4.1 of the Environmental Protection Plan (Appendix B to CPSES Unit 1 Facility Operating License No. NPF-87), TU Electric hereby submits the 1990 Annual Environmental Operating Report for the subject facility.

If you have any further questions, please contact Richard S. Berk at (214) 812-8952.

Sincerely,

William J. Cahill, Jr.

By: D. R. Woodlan  
D. R. Woodlan  
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RSB/vld  
Attachment

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COMANCHE PEAK STEAM ELECTRIC STATION

UNIT 1

1990

ANNUAL ENVIRONMENTAL OPERATING REPORT  
(NONRADIOLOGICAL)

## I. INTRODUCTION

This annual environmental operating report describes implementation of the Environmental Protection Plan (EPP) as required by Appendix B to the Unit 1 Facility Operating License NPF-87. The EPP requires that this report cover the operational period from the date of issuance of Unit 1 low power operating license (February 8, 1990) through December 31, 1990. However, to facilitate data reduction and comparison, this report also includes January with the actual operational months of 1990.

## II. SCOPE

Section 5.4.1 of the EPP requires that Comanche Peak Steam Electric Station (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 effect or evidence of trends towards 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 corrective actions taken to remedy them.
2. A list of all changes in station design and operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental question.
3. A list of nonroutine reports submitted in accordance with Subsection 5.4.2.
4. A summary list of National Pollutant Discharge Elimination System (NPDES) permit-related reports relative to matters identified in Subsection 2.1 which were sent to the EPA Region VI during the report period. Subsection 2.1 of the EPP pertains to aquatic matters that are addressed by the effluent limitations, monitoring requirements and the Section 316(b) demonstration requirement (effects of intake structure on aquatic biota during operation) contained in the EPA NPDES station wastewater discharge permit.

### 111. RESULTS OF ACTIVITIES

#### A. Summaries and Analyses of the Results of the Environmental Protection Activities Required by Subsection 4.1:

##### 1. Groundwater Pumpage

As indicated in Table 1, groundwater pumpage during 1990 averaged 27.8 gals/min or 14,598,400 total gallons withdrawn for the year. This rate represent 22% of the predicted operational pumpage (127 gals/min) identified in the station's Environmental Report - Operating License Stage (Section 3.3) and 17.6% of the actual average withdrawal rate (158 gals/min) reported in the station's Final Environmental Statement - Operating Licensing Stage (Section 5.3.1.2) for the period 1975 to May 1979.

Table 2 provides the annual well pumpage rates for the period 1987 through 1989 as well as 1990. This data supplements the preoperational data previously reported to the NRC in Attachment 1 to TU Electric correspondence logged TXX-6677, dated September 6, 1987. The combined annual rate for all recorded preoperational groundwater pumpage averaged 68.8 gals/min. Therefore, the operational rates recorded for 1990 are 59% lower than the groundwater pumpage from recorded preoperational annual pumpage rates.

All groundwater withdrawn during 1990 was used for potable and sanitary purposes only and no groundwater was used to supplement the station's Surface Water Treatment System for plant make-up. The Surface Water Treatment System provided 1,075,600 gals of treated water for potable use during 1990 to supplement the on-site groundwater production wells.

##### 2. Groundwater Levels

As indicated in Table 3, the groundwater levels during 1990 in Observation Wells OB-3 and OB-4 increased 1.00 ft and 0.50 ft, respectively. The overall groundwater level change during the period September 1987 through December 1989 is included in Table 3. This data supplements the preoperational data previously reported to the NRC in Attachment 1 to TU Electric correspondence logged TXX-6677, dated September 6, 1987.

##### 3. Surface Water Treatment System Operation

The station's Surface Water Pretreatment System processed 31,767,974 total gallons for station make-up water use during 1990. This represents an annual average flow to the plant demineralizers, including Vendor supplied demineralizers, of 60.1 gals/min. There were no outages during 1990 that required reporting in accordance with Section 4.2.2.

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 or operation, nor 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

There were no nonroutine reports submitted under this subsection.

E. NPDES Permit-Related Reports Relative To Matters Identified In Subsection 2.1

Routine monthly Discharge Monitoring Reports (DMR) for all waste water outfall were submitted to the EPA and state agencies for each month during 1990. The following is a summary list of correspondence submitted to the EPA relating to these DMRs.

| <u>Month Monitored</u> | <u>Log Number/Date</u> |
|------------------------|------------------------|
| January                | TXX-90078/2-23-90      |
| February               | TXX-90116/3-23-90      |
| March                  | TXX-90166/4-25-90      |
| April                  | TXX-90196/5-25-90      |
| May                    | TXX-90234/6-25-90      |
| June                   | TXX-90266/7-25-90      |
| July                   | TXX-90308/8-24-90      |
| August                 | TXX-90351/9-25-90      |
| September              | TXX-901006/10-25-90    |
| October                | TXX-901038/11-21-90    |
| November               | TXX-901065/12-21-90    |
| December               | TXX-91041/1-25-91      |

There was one waste water permit non-compliance reported during 1990. This non-compliance resulted when the two hour chlorination limit was exceeded for the circulating water system (Outfall 201).

A verbal notification was also made to the state agency (Texas Water Commission) on October 24, 1990, concerning an overflow of a sewage lift station. This incident was also verbally reported to the NRC on October 24, 1990. A written notification (TXX-88706, cross reference TXX-91009) was submitted to the Texas Water Commission on October 29, 1990.

TABLE 1

SUMMARY OF GROUNDWATER DISCHARGE  
FOR 1990  
(Total-Gallons/ Average - Gals/Min)

|           | PLANT WELL<br>1 (Total/ Avg.) | PLANT WELL<br>2 (Total/ Avg.) | WSPF WELL<br>1 (Total/ Avg.) | WSPF WELL<br>2 (Total/ Avg.) | TOTAL<br>(Total/ Avg.) |
|-----------|-------------------------------|-------------------------------|------------------------------|------------------------------|------------------------|
| January   | 596,100/ 13.2                 | 776,400/ 17.4                 | 181,100/ 6.3                 | 0                            | 1,366,500/ 34.9        |
| February  | 436,300/ 10.8                 | 487,900/ 12.1                 | 238,200/ 5.9                 | 0                            | 1,142,400/ 28.8        |
| March     | 0                             | 896,300/ 20.1                 | 231,000/ 5.2                 | 0                            | 1,127,300/ 25.3        |
| April     | 303,900/ 7.0                  | 432,600/ 10.0                 | 231,000/ 5.2                 | 0                            | 967,500/ 22.4          |
| May       | 471,700/ 10.6                 | 0                             | 241,000/ 5.4                 | 0                            | 712,700/ 15.9          |
| June      | 867,900/ 20.1                 | 97,700/ 2.3                   | 296,100/ 6.9                 | 0                            | 1,261,700/ 29.2        |
| July      | 0                             | 976,900/ 21.9                 | 554,000/ 12.4                | 0                            | 1,530,900/ 34.3        |
| August    | 675,100/ 15.1                 | 183,400/ 4.1                  | 573,900/ 12.8                | 0                            | 1,431,400/ 32.1        |
| September | 424,900/ 9.8                  | 777,100/ 18.0                 | 354,100/ 8.2                 | 0                            | 1,556,100/ 36.1        |
| October   | 1,042,100/ 20.1               | 0                             | 393,000/ 7.6                 | 0                            | 1,435,100/ 27.7        |
| November  | 428,800/ 10.6                 | 0                             | 164,000/ 4.1                 | 0                            | 592,800/ 14.7          |
| December  | 895,500/ 21.4                 | 0                             | 276,200/ 6.6                 | 0                            | 1,171,700/ 28.1        |
| TOTAL     | 6,136,100/ 11.7               | 4,628,300/ 8.8                | 3,834,000/ 7.3               | 0                            | 14,598,400/ 27.8       |

TABLE 2

SUMMARY OF GROUNDWATER PUMPAGE (GALS)  
1987 THROUGH 1990

Pumping Well

| Year | No. 1     | No. 2     | NOSF #1   | NOSF #2 | TOTAL      | Average Rate<br>(Gals/Min) |
|------|-----------|-----------|-----------|---------|------------|----------------------------|
| 1987 | 0         | 4,925,300 | 4,521,600 | 0       | 9,446,900  | 17.9                       |
| 1988 | 7,500     | 1,679,300 | 5,250,200 | 72,000  | 7,009,000  | 13.3                       |
| 1989 | 5,822,000 | 2,530,500 | 4,956,600 | 0       | 13,309,100 | 25.3                       |
| 1990 | 6,136,100 | 4,628,300 | 3,834,000 | 0       | 14,598,400 | 27.8                       |



TABLE 3

1990 SUMMARY OF GROUNDWATER  
DECLINE/GAIN IN OBSERVATION WELLS

| MONTH         | WELL OB-3<br>(G-3) | WELL OB-4<br>(G-4) |
|---------------|--------------------|--------------------|
| January (1)   | 253'6"             | 266'10"            |
| February (1)  | 252'1"             | 266'2"             |
| March         | 251'1"             | 264'10"            |
| April         | 249'3"             | 263'3"             |
| May           | 247'11"            | 262'7"             |
| June          | 249'8"             | 263'1"             |
| July          | 252'1"             | 264'5"             |
| August (1)    | 253'3"             | 266'0"             |
| September (1) | 255'4"             | 267'8"             |
| October (1)   | 254'0"             | 267'11"            |
| November      | 253'7"             | 267'2"             |
| December      | 252'6"             | 266'4"             |

Notes: (1) Levels for these months represent average levels based on weekly readings which are required by the EPP when the preceding month's groundwater withdrawal rate exceeds 30 gpm.

ANNUAL GROUNDWATER LEVEL CHANGE FOR 1990:

Well OB-3: 253.50 ft. - 252.50 ft. = (+) 1.00 ft. = (+) 0.3048m (Gain)  
Well OB-4: 266.83 ft. - 266.33 ft. = (+) 0.50 ft. = (+) 0.1524m (Gain)

GROUNDWATER LEVEL CHANGE FOR OBSERVATION PERIOD SEPTEMBER, 1987 THROUGH  
DECEMBER 1989:

Well OB-3: 252.42 ft. - 254.17 ft. = (-) 1.75 ft. = (-) 0.5334m (Decline)  
Well OB-4: 263.33 ft. - 267.50 ft. = (-) 4.17 ft. = (-) 1.2710m (Decline)

ANNUAL AVERAGE RATE:

Well OB-3: (-) 1.75 ft.  $\times \frac{0.3048\text{m}}{\text{ft.}} \times \frac{1}{2.33 \text{ yrs}}$  = (-) 0.23m/yr.

Well OB-4: (-) 4.17 ft.  $\times \frac{0.3048\text{m}}{\text{ft.}} \times \frac{1}{2.33 \text{ yrs}}$  = (-) 0.55m/yr.